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BY CHRISTIE SAWYER

MAY 2000

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With the addition of a 1,500-square-foot winged Stein in Miss and Diane's residence in Long Island, New York, the first major stepped-by-tablet addition to the sprawling, this new bedrooms with a distinctive look set the original building. Read about the entire renovation in "A Tale of Two Stories" (p. 108).
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—Peter Napoli

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EDITH, P. 34

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LETTERS



What I Learned
Happened to...
I really enjoy reading TD & H and watching the show. I've had the pleasure of reading Marvin and Tom in a home shop and (Marvin's a

bit) more appearance. I look forward to visiting with (and I) this family. I enjoy writing to Sears. This Old House. I think about what (and it would be) the readers might become to be original while. How about an update, with pictures and stories on what has happened to houses featured?

Conrad J. Johnson, Pennington, NJ

Great minds think alike. We're planning to run a feature this Old House update sometime on our December 1993 issue.

Bob Savoy

You mention the head as your answer at ("Save the Tide, Build a Roof," Ask Sears, March 1993). I find it very hard to get into my tub as I have asthma. I do not have good balance, and I'm not able to stand long enough to take a shower. I solved my problem with a small step-on rail that helps me balance myself while getting in and out of the tub. I also bought a special chair made for bathtubs. It's set in the bottom of the tub so it'll be there to "go." My husband installed a handheld shower set I can sit, wash myself, and get out of the tub safely. The small step-on rail cost under \$5, the handheld shower was about \$25, and I got the tub chair at the Salvation Army for \$15. The warranty on my bathtub has run out, but my chair is still working.

R. L. JAHRSOHN, STAMMERSVILLE, MD 21086

Assisting Her

Did you have an editor who just arrived from, say, Foster friend, write the photo caption for "Deep Stakes," Outdoors, March 1993? To the right of the photograph of Dennis and Shirley it says, "Horn, left, and Dennis." Now anyone who has been living in the U.S. for more than a week and who reads your magazine knows who Dennis is. The word "left" is an insult to the greatest man to ever appear on my television.

W. G. (Bill) Deven B., Toronto, Kan.

Source for Remarks

Your article ("Homes Burn," Materials, December 1992) explained how engineered joists are both friendly to the environment and easy to work with. This is all true; however, your readers should be aware of some local building codes that would make using these joists a very costly mistake. In my northern suburbs of Chicago, the use of joists are prohibited in an open-cellinged basement. Plus codes require a builder to never try represent joists as basement ceilings with either fire-rated drywall, a drop ceiling, or a permanently installed insulation system. This code doesn't apply to conventional 2x6s.

John Keeler, Elmhurst, IL

Meeting Plans

I was very pleased to find the "Flow-Dex" (Power, March 1993). It's a clear diagram and would be perfect for beginning design students to learn from. Except for one thing: it's missing a house! Just as for me to learn this important component is required by all codes, and anybody removing one of the future traps would pay the price for its absence.

Markus Zuckermann, Rosedale, NY

Flower traps were once used to prevent mice from going up stairs—or rodents from crawling—out houses from the sewer. Although a national code for house traps doesn't exist, many places continue to insist that either set of limits or other local ordinances require them.

punch list

perhaps it's obvious necessary items or necessary to be done before a house can be sold.

March 2000

The items from the Readers request, deserve strong new leads with lots of room for personalization. (See "Sears," March 1993, page 100.)

The correct number for After Sales, mentioned in "Transformers: Mariana Maffra," is 600-389-8343.

In "The Least of the Good Games" (on page 80 of "Gaming It, The Good Games," the product picture was cut and from the way it's in Games Games and in the \$100 price bracket, wouldn't it be the price quoted in the text? The price is actually \$12.99.

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OUTTAKES

BEHIND THE SCENES AT THIS OLD HOUSE
BY JORDAN REED



Endless Run

UNLOADING THE HALF-ROUND COFFEE CUTTERS FOR THE Saara Barbara project was no one-man job, as some were shipped in unwieldy 22-foot sections. "Flasing pieces that one allows for as few joints as possible," explains Agustin Crookston, the proprietor of Classic Gutter Systems in Kalamazoo, Michigan, which manufactured the lengthy tubes. "That makes installation easier and provides a cleaner look to the finished product." But shipping the goods is not as easy as

the installation. UPS leaves packages to save time, so Classic sends their signatures—which can measure 26 feet long—by common carrier. A truck with a 28-foot trailer hauling items from various businesses picks up the gutters, packed in specially made cardboard crates, from the factory, and delivers them in one day or less. These extremely long gutters also grace the Bilancia and Wauwatosa projects, and they've got Tom Silva's stamp of approval. "With all the expansion and contraction that comes with the weather," he says, "The fewer seams you have, the better off you'll be."

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OUTTAKES

Dry Idea

THE MORTAR-FREE CONCRETE SYSTEM on the garage foundation in Santa Barbara is a complex assemblage of new technology: layers of special membranes and asphalt-based plasters that funnel water away from the concrete and into a perforated pipe that leads to the carbide gurus. First a primer **10** coats the masonry, then a strip of latex concrete **11** fits into the cold joint, a common point of leakage. Next comes a self-adhering membrane **12**, sealed at the edges with mastic **13**. Corset cement **14** adheres another membrane **15**, ready

for healthy polystyrene sandwiched between waterproof sheathing and water-permeable film. Finally, perforated pipe **16** wrapped in landscape fabric **17** lies along the joint, balanced in place with gravel backfill **18**. Local chick Chuck Ham says he's used the material in tunnel systems, wastewater, door flings, and "anything with a high humidity content." Unfortunately, the material will disintegrate under UV rays, so it can only be installed where it will never see sunlight.

Rotary Hammer, Jr.

When it came time to reinforce the foundation of the Berta Berto house, the concrete subcontractors went right for their rotary hammer to chisel 11-inch holes for expanded bolts. While the item appears reasonable (right out, we'd expect it to cost less), the smaller (but lighter) brother—the hammer drill—is hardly as have access for bolting intoasonry walls or floors. The preceding median the drill makes twice the tuning-saw equivalent time. "Drilling it's one task, but there's a lot longer without that function," explains Tom Berto. He's used the rotary drill to make holes for rebar, for rebar and rebar, and for bolts, as well as for rebar stakes on the walls. Since conventional data have a shorter selling, activated with a flip of a switch. But if you're going to use a hammer drill, Tommy cautions, know all the costs. "You'd best get yourself a good pair of sunglasses."



And The Winner Isn't...

In our January/February 2006 issue, we invited TGW readers to submit names for Tom Berto's new power tool, E-mail entries flooded in from across the country, producing more than 500 ideas. We were partial to Tom's Choice, sent in by Dean A. Geddes of East Troy, Wisc., and of tools, submitted by John L. and Jon Foley suggested by Margaret Boyce of New Orleans, La. But leave it to Tommy to choose as a consolation: "Quite a few reader entries were funny," he says. "But I kept going back to 'Twin Around.' It kinda mentioned in our first story I was assigned to writing by Jim Fenn of Cambridge, Mass., which I left in the series. In the interest of full play anachronistic Tommy's interesting hand tools for business and hobby are increasing from his Berto Bros. Thanks to the 11 winners who submitted, say, 'Husqvarna' (our stand-alone). They're in all who participated and congrats to the (dreaded) winners."

ILLUSTRATION BY STEPHEN WILDEMAN; PHOTO: A. BURKHARDT; DESIGN: ANDREW MCKEE

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HOUSE CALLS WITH STEVE

Gourmet Nook

A 10-square-foot kitchen is outfitted with everything its owner asked for, including a grand restaurant-quality range.

In a very, very tight kitchen, Steve's design—or lack of it—made a remodel of Richard Schwartz's big kitchen easy. There was nothing to be done but to tear it. The 10-foot by 10-foot space consisted—an eternity—of one metal wall cabinet, a sink at a drenched height, and a stove from the 1940s. It didn't even have a refrigerator. And the single window faced an asphalt Schwartz, a professor at the City University of New York Graduate Center, bought the Brooklyn Heights apartment at the urging of his friends and former neighbors, architects Volpi and Richard Cameron. "The building is very friendly, with a very 'common' looking, and the apartment was a good deal," he recalls. "I liked its layout and loved the 13-foot high ceilings and architectural moldings—but it was in terrible shape," he adds. "The Condos told me they could make it great."

PROBLEM

Schwartz, who is a gourmet cook, knew exactly what he wanted in his kitchen: a restaurant-quality range and eating counter—and a wine rack. He knew space would be at a premium for the about-\$30,000—was right by New York City standards he told the architects they could stamp out everything else to order to create the kitchen with the equipment he desired. "This is a fairly tight kitchen, so fitting in all the big machines and cork would need demanded a game



"This is a well-laid-out kitchen, with all the big machines an avid cook would need."

—Steve Thomas

PHOTOGRAPH BY JOHN CRUEN



Steve: Lower left: In a 10-square-foot kitchen, the architect accommodated a double-burner cooktop, all cutting boards, and his pretty cut reproductions.

deal of organization," says *This Old House* show host Steve Thomas. As for style, Schwartz asked for the softening influences of an English country kitchen. Because he didn't want the expense and inconvenience of having to rent a place while the work was being done, the Camerons, along with their partner, Andy Taylor, had to complete the kitchen (as well as other parts of the apartment) during the six-month period that Schwartz was on sabbatical in California.

SOLUTION

"Most cooks would pale at the thought of fitting full meals in such a small space," says Steve of Schwartz's 100-square-foot kitchen. "From a design perspective," he adds, "it means you have to make the most of every square inch." The architects did just that by devoting the bulk of the real estate to the range and eating

PHOTOGRAPH BY JOHN CRUEN

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HOUSE CALLS WITH STEVE

corner—there are nooks, open shelves, and counterheight island shelves. "There was no room for a table or an island, but there was just enough to delineate a workspace next to the sink," says Steve. "It's a very efficient kitchen, like a gallery or a room, you just have to be sure that the friends you are cooking with know where you're located with a few simple pings."

After demolition, site prep, and planning, the bulk of the remaining budget went to the range and refrigerator, which made the architect had little to spend on cabinetry. Although they were originally going in oak stack units, the contractor said that, since the job required so few estimates, he could custom make them in his shop—then had to resort to plywood with painted rails and tales, primed



and primed, for about the same price. Wall cabinets were faced with glass doors, to show off the architect opted for single panels of glass rather than frosted lights.

The fact that the kitchen looked out onto an air shaft proved to be a blessing in disguise. When it came time to rent the board required by the range, the architect found that restrictions on altering the exterior of the 100-plus-old apartment building didn't apply to the air shaft, so they could install a vent-through the single wall to the outside without worrying that the co-op's board of directors might veto their plan.

FINISHING TOUCHES

Since the weather doesn't look out on any viewpoints, the architect brought the elements inside the kitchen with decorative tiles depicting pastoral scenes, which were placed within fields of yellow tiles set on the diagonal and framed by several "squares," those "patients," in fact, were dropped onto a tiled floor, plus white ceramic backplash "In a room with no natural light, you need places for the eye to rest," says Steve. The floor is covered with French-square honed-rose travertine tiles; these were installed hot, screeded up to highlight their texture, and then sealed very early to withstand any spills. The blue-tinted countertop, made of a high-density tilestone known as Pierre de Cordon, echoes the blue of the river tiles. The cabinet

uses the durability of granite with the natural beauty of soapstone.

The architect found the clearest reproduction hardware (and the ceiling lighting fixture) in home-products catalogs; the hardware and fixture fit into the scheme perfectly, and, as a result, don't look like second-chances. And, they were appropriate, too. "For a mini-country kitchen," says Steve, "this one fits in. And, in the end, that's all I need that."



LEFT: In the new kitchen, each cabinet was given a specific function: to store glasses, fruits, or (TOP LEFT) 23 wine bottles. BLACK AND WHITE: A 30-millimeter polyisocyanurate and a distributor (which sits under the sink), fit into the redesigned space.

marries the durability of granite with the natural beauty of soapstone.

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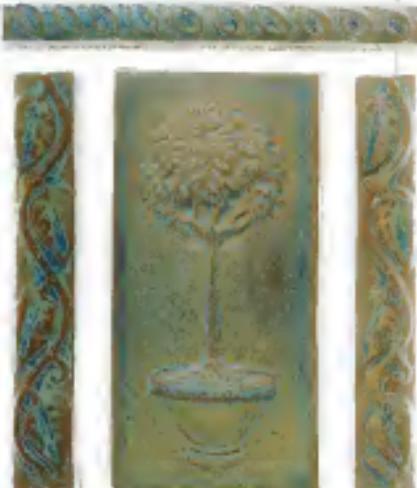
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tile style

The mix-and-match approach to creating a backsplash is one that's catching on in kitchens across the country. In the Schwartz kitchen, a field of 4-inch-square white-ceramic tiles is broken up by "piscines"—

ceramic plates that are painted with blue-and-white swirls and border stripes in high-gloss varnish. Alternative ideas include Portuguese hand-painted tiles, glazed in blues, terra-cotta, and various borders and corners, and non-slip-surface tiles. A 12x12-inch square mosaic made of 4-inch square mosaics is considered ceramic. The non-HF "English Transfer" tiles come up with two styles of coordinating "trivets" and the major "Birchberg Vines" tile



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ASK NORM

How to fix cold crawl spaces, sagging roofs, and ugly concrete walls

X-RATED DRYWALL

The offices about Dick Libe's house the remodeled one into a question. Has he had vinyl drywall? Why doesn't he use 1/2-inch fire-resist drywall throughout the entire house? Why wouldn't he pay a premium over standard drywall to have a more fire-resistant structure?

Steve Miller, Boston, Mass.

The 1/2-inch, "Euro-code" drywall (called Type X) increases a wall's fire rating to a minimum of 1 hour, from the 30-minute rating for standard 1/2-inch drywall. And it's not just thickness that makes the difference. Type X has a denser core and contains glass fibers that keep it from crumpling in a fire, but because Type X is slightly more expensive—about 75 cents more per sheet—it's rarely used in residential construction, except where the building code requires it—or with separating an attached garage from the house, and around the boiler in multiple-family dwellings. If you're willing to shell out the extra dough, you certainly could use Type X throughout a house, but it won't necessarily be safer. You'd also have to close off all the other pathways for fire to travel—open doorways, non-hinged doors, walls without fire blocking—and that could get costly and look ugly. Type X does have another often-overlooked virtue: it dampens sound transmission through the walls. Do you have morning?

WORKING IN WINDOWS

The house we recently purchased was built in 1930, and like many of its era, it has a bathroom with a tub but no shower. We used to make like a tub-shower combination, but every time the shower overflows, the tub gets clogged, and it's hard to keep water up the wall, and I think the tub was installed over setting drywall. What are my options?

Don E. Strumwasser, Glendale, Wis.

I personally don't like the idea of a shower on a tub—water will probably pool on the tub and seep into the walls, rotting insulation and rot. If the tubesse is in fire drywall, it won't last long. You'll have to strip the walls down to the studs (or lathing, if necessary), while you're at it, cover them with 1/2 pound builder's felt, which is

screw-on panels of cement backer board in a horizontal fashion all the way to the ceiling. That's how tiling contractors like Fersner do it (see "Measure Twice, Cut Twice," January/February 1996, p. 40). At this time, you could simply block up the window and site over it. Or you could leave it in place and cover the tub and perimeter with backer board, and tile. Better yet, top the felt and backer board with a drywall all of marble. Occasional water spray on the window itself probably won't be a problem, but you could drap a clear shower curtain over it or fit an insulating storm pane into the window to protect its wooden parts more completely. And if there isn't an exhaust fan in the bathroom already, be sure to install one.

THE ROLE OF FELT

As I read these letters to *Builder*, I question the logic of some of the construction practices. The writers, for example, just don't seem to understand what's what. Shouldn't that insulation be wet? Shouldn't it be water-tight?

Gene Bower, Broomfield, Colo.

Don't worry about the shingles, the life is going to get punctured even more by the roofing nails. The purpose of felt—a heavy, asphalt-coated paper—isn't to waterproof. It is supposed to protect the sheathing from sunlight and water until the shingles are installed, keep asphalt shingles from sticking to the roof deck, and offer a measure defense against any water that might someday get past the shingles.

LEAK-FREE SKYLIGHT

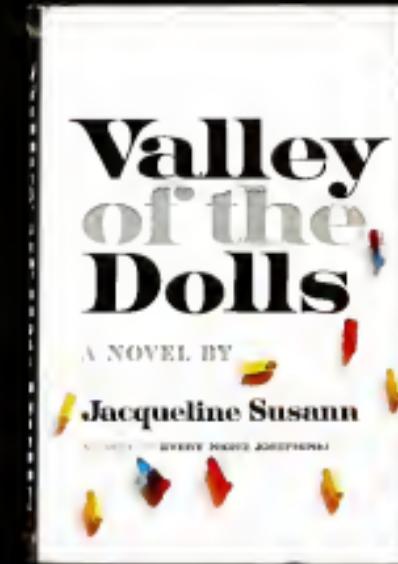
Frank Breslow, a construction architect, says, "When I retired, I removed all the skylights in my wife's sunroom because they leaked. During one of your shows, you mentioned that a skylight sealed in an existing roof will eventually leak. But what about a skylight that is made during roof replacement?"

Charles Borodkin, Boca Raton, Calif.

I say you always have to be careful installing a skylight after a roof tear off gives you the chance to repair any cor or sheathing damage, and also makes it easy to flash the skylight properly with a step flashing on the sides and single piece lead flashing. A leak skylight maintenance issue and this is a good idea, too. When ever I clean gutters, I check the upfall side of the skylight and close



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ASK NORM

THINNING TO A FAULT

Our old house [prob. 100 years old] is not as old as its parts. My grandfather built it in 1940 using lumber and slate roof shingles from a demolished railroad roundhouse, and flooring and trim salvaged from various old houses my uncles saw down. Although Georgia Inspect built the house, [Conn.], he apparently didn't understand framing. Now when youagine the slate floor joists that go in the wrong direction (parallel to the ridge) over half of the house! Because of this, the house sagged considerably. A structural engineer suggested that we not try to straighten everything, but just reinforce the structure by making the floor of the house to the back. In addition, the roof shingles are breaking rapidly—Georgia's [Conn.] vendor didn't allow for escape route. Should we tear off the roof and rebuild it with proper framing, venting and insulation, none of which we have now? If so, can the 100-plus-year-old slate be reused?

—Dorothy Simes, Roxbury, Conn.



Your grandfather was probably trying to get the most out of whatever lumber he had on hand. It's an honorable approach, but he obviously used the materials in ways that disadvantaged the house's structural integrity. With no points to reduce the weight of the slate and the increased threat of the rafters, your roof truss system and your roof has a bad case of

asbestosis. If your budget is tight, I'd defer to the engineer on this assessment: straightening bowed walls and a sagging roof is an expensive and complex proposition. If you have the money, though, get your engineer to draft a complete rehabilitation plan and find a contractor who specializes in residential and small commercial projects. Though steep usually, it can't be an excessively arduous task; there are existing, less expensive and they're more likely to take an interest in small remodeling projects.

problem to repair old slate, provided they're not cracking and flaky. An experienced slate should be able to tell if they're still sound.

LOW-BUDGET DESIGN HELP

Our house [prob. 1920] is a large concrete slab on the inside, that's reasonably dry and sound. We thought it would be nice to insulate the inside, but we're not sure exactly what we should do. Would a contractor be able to help us decide what the options are, or should we talk to its architect?

—A. Hartman, Herkimer, N.Y.

When the job is relatively small and your budget is limited, there are a few options. Some are more design-intensive than others, but most will be able to suggest several possibilities, as well as tell you how long the job will take and approximately how much a well done. Ask for photos of similar jobs they've done, or go take a look at them yourself. Your budget will be a deciding factor in any project, of course. If you're still satisfied, you could discuss the work with an architectural designer who specializes in residential and small commercial projects. Though steep usually, it can't be an excessively arduous task; there are existing, less expensive and they're more likely to take an interest in small remodeling projects.

CONCRETE COSMETIC

We need your advice for insulating two exposures on our 10-foot-by-10-foot exposed concrete foundation wall around the utility and a concrete service wall at one corner. The otherwise. We thought about insulating

the concrete with stone, but were offered by a \$12,000 bid that would have stone at about 800 square feet of wall. Are there less expensive approaches we should consider?

—David Birrell, Peoria, Ill.

Concrete makes a wonderful foundation, but who wants to look at it in its raw form? Around the utility, I'd simply cover a wall facing to match the house—if I can't imagine why that would be on the inside. The work is straightforward and takes pre-treated wood 2x6s and attach them vertically to the concrete, 16 inches apart, using masonry screws or sprung spikes. Then add the cladding to the 2x6s. You should leave at least 8 inches between the cladding and the ground to protect the wood from splashing water. Plug the opening along the bottom with 6-inch-wide foam insulation to stop insects and other pests from moving in. Also, be sure to protect sections of the siding before insulation. As for the concrete remaining well, you might want to use gypsum-based—very simple “tiled” or a fairly consistent thickness—to keep insulation down. If you could consider a resort of foam core trade with lightweight, natural concrete. We used our own product at the Santa Barbara project, and it's a cloud-ringer for the real thing. ■

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Heady Metal

Stainless steel, zinc, and copper—the signature countertops of serious cooks

BY THOMAS FIELDS MEYER

Until planner Philip L. Karpala worked as a chef for six years, he was nervous about the cooking space. "I wanted a chef's kitchen," he says, with a can-do attitude, plenty of room to stretch wings, and great work surfaces. "I'm used to working in kitchens that have the right kind of counters," he says, "and that means stainless steel."

Chefs choose stainless steel for good reasons: It's durable, stain-free, easy to clean, and attractive. "You can put a scalding pan directly on the metal," says Randall Seale, a kitchen designer in Kansas City, Missouri. "And for doughs that need a cool surface, like pretzels and dumplings, this is the counter to work on. Best of all, when you're done, you just wipe everything down with soap and water." An alloy of iron, chromium, and nickel, stainless steel is unaffected even by harsh liquids that react with other metals: lemon juice, vinegar, eggplant juice, bleaches. Above the biggest mistake is to cut from a stainless steel pan or steel wool pad that's left on the counter overnight. And while steel will scratch slightly from everyday use, you can buy it with a random-grain finish that hides the marks.

The cost of stainless steel is on the same budget as other premium counter materials like marble and granite (roughly \$400 per square foot plus installation), but it has a distinct advantage: The counter, backsplash, and sink can be integrated into a single stainless steel, similar to solid surfacing such as Corian. There are no grout lines or caulked joints where dirt can collect or water can seep through. And metal is durable to cracking and ghee-wear. "You have to be careful when you use the oven or your gas line because, or you might

TO THIS DAY, KARPALA'S KITCHEN IS THE COOK'S PARADISE. "I CAN MAKE ANYTHING I WANT," HE SAYS. "I USED TO SPEND HOURS COOKING, AND THAT'S NOT IN THE AIR ANYMORE. COMMERCIAL KITCHENS."

PHOTOGRAPHS BY ERIC BANK



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COUNTER CULTURE

lose a glass," says John Cave, of Quinn Metalworks Ltd., a metal caseworker fabricator in Mississauga, Canada. "But metal has a lot of strength."

Making structures and monuments requires exact measurements of the layups. Cave says, because other materials, even stone, metal catalyst can't be adjusted on site—“in the shop, metal workers measure the dimensions to 1/16 gauge sheet metal (about 7/8 of an inch thick), then glue it with a glue—like a paper cutter. The glue toughens, measured out with a gloved hand, 30,000 degree minutes of flexibility. Workers use a 120-lb hammer to hold the edges down and the bad boy lighter to the top. The next step, welding the carbon angles, is “what the metal workers do,” says Cave. “The welds have to be absolutely free of rust so they can be ground and polished until every surface is smooth and shiny, or if a bad bond persists in place. Then, the top is flipped over and a plywood substrate contact is cemented to the underside. The resin is processed under a heat press for 4 hours long with one coat. The structure is reinforced just like any other type, by driving screws up through clear clamps of wood that run across the top of each catalyst into the plywood substrate. If the corner is too large or difficult at this point, the fabricator will come on site to add sections together and polish the seam.

Not all of the metal contexts that Cave makes are steel, however. Some people forged brighter, more ornate characters for the older look of copper and zinc. "Long before houses had running water, dry sinks were lined with these metals," says Soto. Zinc was also used more for tub linings, drainboards, and backplashes in the 19th century, both metals, which cost about the same as stainless and for convenience, lend a softer, more traditional appearance to the kitchen. But they also scratch more easily and are prone to buckling slightly if they aren't used under hot pots.

Copper and zinc also tarnish. "The look and feel changes dramatically," says Gary Sutaria, of Sutaria Inc., a metal counter-top fabricator in Chicago. "It's very much like 'Keeping a high luster would require strenuous constant polishing, so most homeowners just clean their sinks with a sponge or wet cloth, allowing the metal to develop a patina, fuzzy looks for copper and pewter gray for zinc." One thing they must do is spot-polish these metals, "says Sutaria, "because the area you clean will stand out like a sore thumb."

For Rangwala, practicality dictated the choice of a canteen-style "I've seen a lot of high-end kitchens where the cooks look pretty, but they aren't functional." But there's no denying that his gleaming steel canteen makes a statement about how seriously he takes his cooking. "People always sit and when I'm going to open this place it's a statement," he says. ■



entirely. During a pleasure cruise, and at many ports, a small metal number-plate is fixed to an oil-skimmer and is a means of identifying the vessel. During the cruise, the number-plate does not move and provides a fixed-point reference to permanent marks on the hull. The only way to identify the vessel, however, is to read the number-plate until the number is read.



A study of the effects of



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Clearing the Air

Proper ventilation keeps grease and steam out of the kitchen

The shrimp stir-fry was a hit with your dinner guests, but your air filter won't be thanking you. Last week's prime in garlic smoke? You don't even want to know what it's doing to your clothes. "An average family produces over a gallon of subterranean grease in their cooking every year," says Karen Collins, a manager at Kroger's Westgate, the country's biggest seller of vent hoods. "Now, where do you think that stuff is going?"

Without some sort of ventilation system to whisk it away, all the by-products of cooking—grease, heat, steam, odors, and smoke—will settle in whatever surfaces they heat, causing appliances to stick, burning away at cabinet finish, and yellowing ceilings and walkways. Unfortunately, most building codes around the country don't require kitchen ventilation. And homeowners, if they're given any thought at all, have been turned off by experiences with

noisy, ineffective, and hard-to-clean hoods. Responding to these complaints, the makers of kitchen vents now produce units that are more efficient, quiet, and easy to clean, as well as more stylish.

Venting options come in two varieties: recirculating or ducted. Recirculating hoods suck the air up from the cooking, push it through a mesh screen and charcoal filter to trap grease and odors, then blow it back into the room. Ducted systems draw the air through a filter or grease collector, then push it outside. According to *This Old House* contractor Tim Salvo, ducted systems are superior. "You never know the recirculating ones to really work," he says. From the makers of these systems advise to their customers: "If you can't put in a duct, it's easier to humor than nothing," says Collins. "But it's better to get the pullouts out."

There are two basic ways to get bad air out: with hoods, which

VENTS A recirculating system is a fairly simple affair: a ductless unit that sits above the cooktop and filters out cooking grease—smoke, steam, and odors.

PHOTOGRAPH BY ERIC AXEN

Each day begins with the goal of building the ultimate range. And when we finish that one, we start building a second.



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Waynesboro, Mississippi. Ford Country. December 18, 1999.

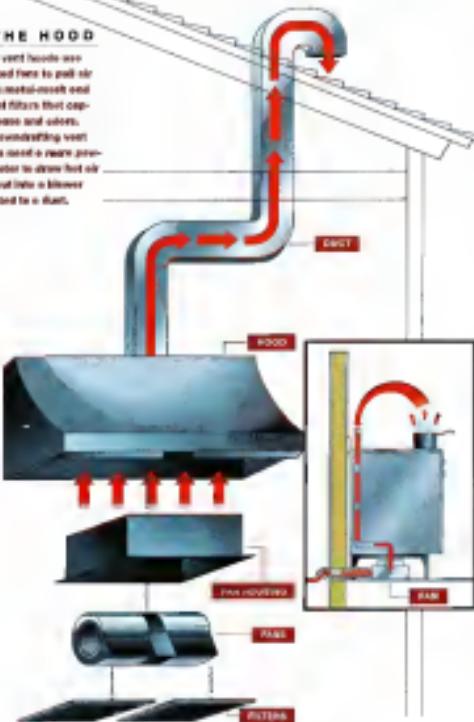
The all-new Ford F-150 SuperCrew digs in.

If the crew fits, cut here, there are no bigger jobs, no greater tools. If you need a road, you make one, and it takes a crew to do the job. "Cut here" is a 330,000-acre forest. The crew is a forest management team — guys who cut trees for a living. They burn to prevent growth, and they say teamwork is everything. "If I don't do my job, the other guy could be in trouble — could get trapped." And the right tools are essential. On the equipment list this time out was the 2001 Ford F-150 SuperCrew. "It hauled everything we needed through ditches, down hills, through water and over six inches of Mississippi mud." Yeah, the mud can get thick, and the air can reach 150 degrees. Perfect conditions for a ride through Ford Country.



IN THE HOOD

Ducted vent hoods are mounted here to pull air through metal-foam and charcoal filters that capture grease and odors. Many stand-alone vent systems need a more powerful motor to draw hot air down and into a blower connected to a duct.



are exhausted over a range or cooktop to draw air up and out, and with down-draft systems, which pull smoke and grease down and out through a vent located at cooktop level. For both types, the duct can run through walls or ceilings or even under the floor. "The shorter the run and the fewer the turns, the better," says Tom. That's why the ideal setup is a hood mounted right above a range, and ducted through an outside wall.

To work properly, a hood should open the range cooktop, and be installed at the right height—"about 30 to 34 inches off the range

is a good rule," says Tom. "You don't want it too low, or you'll be hitting your head. And you don't want it too high, as it won't catch or reduce grease." Equally important in making sure it has the right to suck your range is a high power-to-weight ratio. A high power is measured in CFM (cubic feet per minute), how much you'll need depends on the heat output of your cooktop. The best way to calculate the appropriate CFM is to take the range's oven BTUs, as if every thing were used up, and divide by 100. "In other words, effectively accounting for the waste heat," says Ed Gobet, national sales manager for Vent-A-Hood. "During the holidays when you're doing a lot of heavy cooking, you probably will need it."

If the distance between your hood and cooktop is greater than the recommended limit, a higher CFM air compressor blowdown system, which are installed or factory-built into a range or cooktop, can also boost draw and add more sucking power since they're built into the range itself. That's not that bad of a plus, though, there is an hard-and-fast rule for how much CFM is odd in either case. 200 CFM heat from Thermos, who creates the Old House Kitchen, spend for the virtually maintenance-free duct system in his own kitchen, where the cooktop is at a premium. A slim, motorized vent with 10 inches of air of the cooktop with the top of a range, but only about seven inches off the way. "It's not an efficient air hood would be, but it works fine," he says.

A venting system with one catch: CFM hasn't overpowered. At the expense of sucking up grease, a more powerful fan can also remove a house's heat and cool air, as originally intended, human, much the same draw a chimney on the exhaust goes from a surface with higher heat being input. As a result, kitchen ventilation must go hand in hand with well balanced whole house ventilation. See Bell-Solomon's "Rev It Backwards," March 2010, p. 61.

Kitchen vent hoods work, of course, when it's left on throughout the cooking process. But many people don't turn it on because of the noise. "Nobody wants to hear a jet engine taking

off at their kitchen," says Jennifer Capasso, brand manager for Thermador. Although some low-end hoods do sound as if their drivers were made by Boeing, better made models at low speeds are in quiet as a murmur. To compare noise output, ask for the unit's sound ratings. (See "What's That I Hear?" below.) A healthy, consumerist take would be made quiet by locating the motor on the roof or a saddle on a wall. "It costs no more, but if it is in an issue, it's worth it," says Capasso.

Regardless of which system is installed, it must be cleaned regularly. The wet mesh filters trap fat and go into the dishwasher, while charcoal filters in ductless models should be replaced periodically according to the manufacturer's recommendations. If grease is allowed to build up on filters, it not only reduces a blower's efficiency, it allows more oily aerosols into the dishwasher, creating a fat load. (Tom Silve once had to replace an entire unit because grease in the ducting caught fire.) Some hoods have no filters at all, they use centrifugal filters to trap grease in a housing that's simply wiped clean with a paper towel.

As the costs go up—to more than \$30,000 for solid brass or copper hoods—so do the number of features, technologies, and materials upgrade, including slide-out racks that disappear when not in use, heat lamps and whiskers, shelves, pot and utensil racks, separable spoons, even sensors that turn the fan on automatically when they sense heat. Ultimately, at a certain price level, hoods are one of the best ways to CFM, so they're about making a design statement. A rounded, sculptural shape made of an eye-catching material becomes a dramatic focal point. "High-end hoods add sex appeal to the kitchen," says here. "Some people acquire them because they're cool cooks. Some people would like to acquire them because they would like to be cool cooks, but some people just have them because they look great." So much for catching grease. ■



Because of its prominent placement in the center of the kitchen, an island vent hood can become a piece of equipment.

WHAT'S THAT I HEAR?

By yourself or up to six others, how loud is your kitchen? If you're not quiet, you're not alone. In fact, most of us are. So who's to blame? "There is none," says Steve Thomas, with a laugh. "Men drive them off. I don't get into that kind of stuff," he says. Even some people who work inside think that noise isn't overblown. But Dale Pomeroy, director of the Home Ventilating Institute, an organization that represents manufacturers of kitchen equipment, believes a measure is designed to tell consumers to encourage the use of exhaust hoods without a calculator. This measure is taken on behalf of consumers, 50 excess to 100 decibels, and/or 40 dB. "It's hard to understand because it's linear," he explains. "With decibels, every three decibels double your sound." But he adds that the eight decibels of a typical range hood? "Technically, a one in 40 decibels at a frequency of 100 hertz pure tone," he says. "The equivalent of a quiet-running refrigerator." If this sound at eight refrigerators is a bit hard to imagine, peer yourself in front of a window air conditioner on a hot day; you'll hear the whirling sound of one hood working.

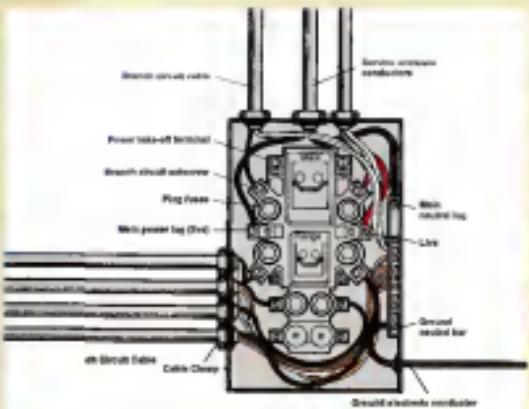
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BEFORE

The original house had been left to decay after the couple who owned it when the Knaus bought it. The family had done as much as they could without the deep pocket of a real estate agent.



Viva Victorian
A North Carolina couple restores a dilapidated 1880s house to its former glory

When Karen and Paul Nagle's younger daughter graduated from high school, the family made a trip to Lake Sprague, North Carolina, and fell in love with the 600-acre community. "As we crossed the bridge into town, I felt like I had come home," says Karen. Four days later, they bought a vacation house.

Beautifully situated on a 3-acre hillside, the property looked out over a river valley. Mature magnolias and Chinese black walnut trees and a century-old hemlock tree decorated the grounds. But the house itself was old. "It looked like a one-story ranch," Karen says. "It's made, at best, 10-foot ceilings and those incredible planks on log coddlin."

Word about the sale of "the old Knaubough place" spread quickly through Hot Springs, and neighbors began stopping by with photos and gushing descriptions of the original home—a three-story Victorian mansion, with a wrap-around porch and a tower. It was built in 1886 by Colonel James Henry Holcombe

Romough, who ran a smugger from Greenville, Tennessee, to Greenville, South Carolina. But the building was decapitated in the 1950s, perhaps because it was in danger—through some say it was target red of ghosts. The house's history, and the town's gossamorous, pleased Karen's mother.

"The kids were off to college," says Karen. "And after all the years that had devoted to my career as a mom, it was time for me to do something else. So I decided to become a remnant and an entrepreneur." She planned to renovate the building in its original three-story height, then run it as a bed and breakfast, while Peters continued working and living in Charlotte and moving to Hot Springs to help out on weekends. "In a few years, Paul would take an early retirement. By then it would leave the business, and we could use it again," Karen explains.

They began recruiting local crafts men to restore the interior. Paul even hired the chef at a favorite local res



BY DIANE CONRAD PHOTOGRAPHS BY CHARLES HARRIS

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man to be a liaison on the job through the winter months. Meanwhile, Koeni interviewed architects to design the addition, including Jim Givens Architects, of Madison de Gauw Architects, in Ashville. "This project was intriguing because you could use vestiges of the original late-Victorian house that had been there," says Mathews, an expert in historic preservation. "And our mission was to restore and re-create that history."

Since no architectural drawings of the original house existed, Mathews spent two months doing detective work, examining old photographs with a magnifying glass (figures not available) and porch configurations. By gauging the proportion of the porches and comparing them to measurements of recent houses, she determined the size of windows, the pitch of the roofs, and the height of the towers. In the end, Mathews located the old Empress on the chimney. They had been filled with bricks and concrete when the house and its chimneys were fixed, but she traced the location in and out of original fireplaces. The main porch provided evidence of the location of a second-story balcony was to be. And shadows on the wood board along the front entrance indicated where the staircase had been.

The first step of the project was to remove the roof in order to add the upper stories. But that threatened the porous plaster remnants on the first-floor ceilings. "No matter how careful you are when you do second-story additions, there's always the potential for leaks, especially in a wet mountain winter," says Mathews. "With the plasterwork in this house, that was not a risk we could take." So Pepe began looking for a way to protect it during construction.

At first he thought a large pump truck might work, but soon learned that if pushed that high up, it would flip over in the wind. "I looked into everything from traps to stretch bungee," says Pepe. He found the answer in a giant plastic bubble that's large enough to protect him. "A tropical pitcher in Florida began building the bubbles for his church earnings," says Pepe. "Now he sells them the all sort of uses, like the bungee tent for the Atlanta Olympics." The giant half-sphere looked like a big globo towering over the single-story house.

The bubble stayed up for five months while general contractor Rick Killion constructed the addition. He took off the roof, then

built a massive platform over the first-floor ceiling to hold the upper stories. The old posts would not have been able to absorb the weight, he says, and if they shifted, the plaster would have broken on the ceiling underneath them could have crumbled. "The posts were just 2x6s, which spanned 18 feet in some places," Killion says. "They would have bowed under the weight." So, he built a new framework on top of them using insulated wooden lumber, plywood beams that reinforced the weight of the addition to the bearing walls. Over that, he framed the new walls, floor, and roofs, which included three gables plus the standard roof on the tower. Once the roofing and windows had sealed the building, the balloon was removed—uncovering which drove a crowd of townspeople who were seeing the re-created building for the first time.

Next, Killion turned his focus on the proposed look: cedar cladding, new flag-painted redwood trim, and gingerbread porches. "We looked at the porch railing in the original picture," he says. "Then we sketched the design and Rick re-created it in his car-



Left: The original porch, now gone. Above: A gingerbread porch with the 4x6 posts from under the plastic. *Opposite:* With the roof on, a crew lifted the "deflated" door off the house. *Opposite, above:* An 18-ft. porch over the road. *By* Pete and Karen Meigh (Ingrid) (1998)

PHOTO AND DESIGN BY INGRID (INGRID) (1998)

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shop in the garage." Kallan said a 16-inch plywood template to trace the design onto 8-inch marine plywood, then cut it using a combination of a scroll saw and jigsaw. The exterior was true to the original heart, but not an exact replica. The many real elements of the 1880s piano were deemed too expensive to re-create.

While Kallan focused on the exterior, Peet's crew went methodically stripping the surface back until it was original. Floor plans, moldings, fireplaces, wainscots, and doorways were all replicated based on the historic documentation. Carpenters duplicated the unique staircase floor on the upper landing, with alternating walnut and pine boards. For the side plank floors in the rest of the addition, "we chose Number 2 pine actually but lots of knots and imperfections," says Peet. "They are worked really hard in the stains to match the dark fir floor color." Mauers assisted ceiling moldings and crown moldings on the first floor using versions as models. Upstairs, they covered the corners with aged lacquered picture frame molding that was prohibitively expensive.

Peet even negotiated for the return of a feature that had been removed when the house was stripped down in the late 1850s—the original newel post for the end of the staircase. The hand-carved piece resided in a neighbor's basement. "Sis, I went down there," explains Peet. "We drove a beer and I told her that I'd be willing to pay some money, plus build her a replacement post, if we could negotiate it to our house." They struck a deal.



Workers applied dozens of layers of paint from plastic canisters to replace the dark, distressed color of the angel and grapevine decorations never removed from the original 1880s moldings (carpenters replaced oak wainscots from the floor up with marine plywood). "It's a lot of work," says Peet. "But the time just kind of goes by, the memories stay in your memories," says Peet. **Peet**

Throughout the project, Peet spent his weekdays working at the bank in Cheshire and his weekends on the job site. Then, in the spring, with the project in the home stretch, "I was diagnosed one of my jobs after 22 years with the company," Peet explains. "There was no running back. I left like Evel Knievel going 110 mph and just ran straight from the camp. When I lost my job, the only thing to do was put the pedal to the metal and keep going." The Nagles finished the piano, then got serious about making the art financially stable. "The layout was really a blessing," Karen says. "It forced us to do what we were raised to do—devote ourselves to the art. Plus we get to be together, rather than being at a weekend marriage."

After 18 months of construction, the old Rumbough house had regained an airiness in a grand Victorian manor. The Nagles eventually cracked a job offer to one of the restorers—the dad who was moonlighting as a carpenter now ran that lumber. In no time, the seven glass-coach Mauers Magna 2 lit its burner, nearly 2,000 grates and 10 swivels. "There was a time when we couldnt see the light at the end of the tunnel with all the critch in a Victorian house," Peet says. "But now we're thankful for every critch of the whole crew put into this project. And our old Cheshire friends, who used to be very happy to do this, can't get enough of that place." ■



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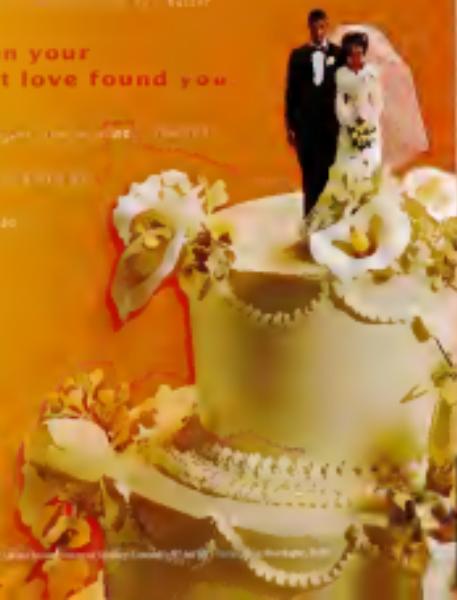
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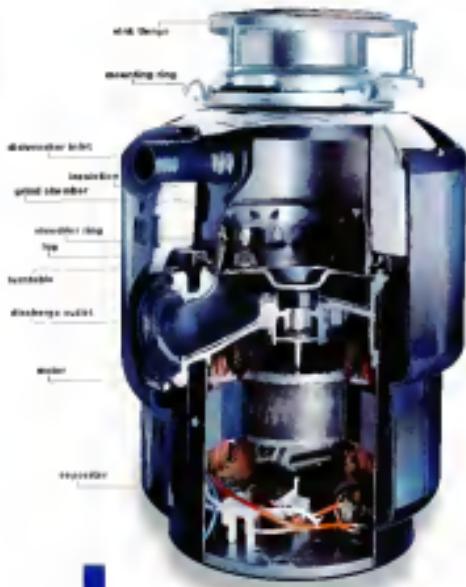
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Garbage Disposers

BY MAR ALEXANDER



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With the power disconnected, turn your disposal counter-clockwise to the left to dislodge the jam. If this fails, you may need your owner with the disposal set to the slot on the bottom side of the unit and turn it back and forth to free it. Then, set the disposal counter-clockwise to the bottom of the machine to remove any loose material and clean partitions.

At reaching into a garbage disposal to pull out a lost fork feels like putting your hand into a lion's mouth, few not too long in the use, it reached out."A disposal has no blades to it," says Bob Bousell, a product manager at InSinkErator. A disposal works by centrifugal force—up using either than cutting. Two stainless-steel logs whirling on a turntable in 1,725 rpm smash food debris against a stationary ring that shreds the waste into bits small enough to wash down the drain.

The disposal was invented in 1937 by John Hammes, a Wisconsin architect who built one for his wife, Jean. Hammes was also the first person to experiment a disposal jar, no doubt. To avoid this dissolved events, T.G. P. planning expert Richard Treheway recommends always run a disposal with cold water, which emulsifies grease so it passes through as a solid. Then let the water run for a minute after turning the unit off to flush it out. Some things should never go in a disposal—clamshells, fibrous vegetables like artichoke leaves, and dried cleaners which can corrode the metal—but bones are actually good for a disposal, they show no residue clean. ■

PHOTOGRAPH BY DAVID HAMSLY



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Move or Improve?

A growing family. An undersized house.
How to assess your options



W

BY MAGGIE MAHAN

Joe Mary and Andrew Samps built their Colonial-style home in Hingham, Massachusetts, seven years ago, they told the contractor they wanted a two-story layer with a large window. It didn't occur to them to ask for a mudroom with a side door off the pool. In other words, they didn't plan for children.

"Now, we could cut less about the tops," Mary explains. But with two children under age eight, the cavern is a sole entrance "with a big walk-in closet for the kids" shows, lists, and boos. "She also suspects that their first bedroom house will become a lot snug as their family grows." The extra bedroom is really small, "says Mary. "It's not really even suitable for a guest room—unless you want to discourage visitors."

But the Samps need more than a one-room addition. "We have just two full bathrooms," Mary points out. "We'd like a third." Add a den, plus a room over the garage—the cost quickly

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claims to \$50,000. "And we're not at all sure that we would be adding \$50,000 to the value of the house," Batory explains. "That's when the idea starts churning at your head—maybe we should move instead."

The Savagins face a common dilemma: move or upgrade. Upgrading a family is a traumatic, but motivating a home can be just as stressful. If they move, Mary wonders about the risk going to a new school. "We love our location," she cautions. "Our house abuts a community, and we know all of the kids on the block. You do get attached." It's an emotional decision. That's why it can be a good idea to step back, clear your head, and compare the financial costs. The savagins can be open to selling their compelling, or, fact, that they were going to the decision.

11, like the Semper, you're attached to your house, a renovation is usually the best option you'll consider. To determine the price of the job, make a list of the improvements you want, rated by room. Don't forget the details, newel posts, balusters, and showerheads add up. Then subtract those that have consequences, asking them to break down that exterior

man by room to fit your needs if you decide to clear your place later. When the bids come in, add 10 to 15 percent for the architect, and you'll have a rough idea of what your upgrade will cost. If the price seems steep, remember that this is one of the very few choices you'll ever have to make a profit on free (unless \$20,000 in a high flying location costs more).

Improving. "Appraisers say that too often, homeowners put more money into a home than the house and the block can support," says Newberg. "Neighborhoods are terrible," explains Richard Newberg, of Appraisers Unlimited in Brookline, Massachusetts. "In one area, we've seen all but \$150,000 to \$200,000 in appraisals, they stay at

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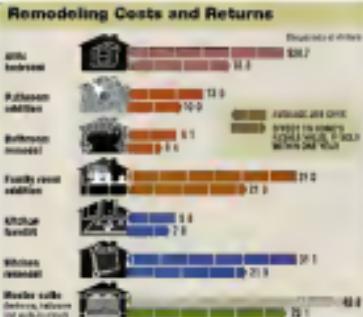
MONIFYCLIP

Home improvement

For the biggest return for your remodeling investment, when you sell the house, look to the heart of the home. "An updated kitchen," says Bryan Reinhart of the National Association of Home Builders, "usually increases the house's value more than any other improvement."

But don't consider it a preservatives for selling. "Typing in predictor what a buyer will want to do is risky business," Kateshava cautions. "Repositioning an improvement group only if you're planning to enjoy it for a while." Then if you will, say those in six years later, you've already "pre-sold" by using the remodeled space, and you're likely to make a little money—assuming the real estate market is strong and your remodeled abode hasn't gone out of fashion.

"We're looking for the best short-term investment just before selling, take care of maintenance and repairs, or do a little simple remodeling," advises Pfeifer. According to a 1999 study of real estate agents, a kitchen has 60%—or more—paint or wallpaper, lighting, and counter-tops restored, nearly 60 percent of the cost after just one year. By comparison, Hogan's remodeling projects—the 4 companies she's evaluated—returned a 50% profit. "It's personal," says Devlin.



average costs in 1997 for non-medical and medical services on home health care at the time—and the result of good planning, had a commercial basis of compensation. (See *Planning* August 1997, *Cost vs. Value* chapter.)



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\$100,000 and top off around \$250,000 to \$275,000. Just a \$30,000 kitchen on a \$100,000 home on a \$150,000 block, and when it comes time to sell, you won't get your money back." Nowling warns, "If you're near the top of your market, you can't shear yourself onto a weaker market, no matter what you do. Buyers willing to pay that much for a kitchen are looking at million-dollar houses in other neighborhoods." Increasing the square footage of the home might not pay you back either, warns Bob D'Andrea of Capital Appraisals in Frederick, Maryland. "I remember evaluating a townhouse in Baltimore," says D'Andrea. "The owner had almost doubled its size, but huge houses weren't the norm in his area and he didn't get enough money for the bigger house. He might better have put his money into buying a bigger house in a less expensive neighborhood."

Of course, if you plan to stay in your home for, say, 10 years, you don't need to worry so much about getting the best. The use and pleasure you derive from your dream kitchen may justify the cost. But if you're not likely to live in the house long, "you're probably better off using the money to move to the bottom end of a better neighborhood," advises D'Andrea.

On that note, the Sengensfig to know of moving to a new house. But migrating to a posh neighborhood means securing a posh mortgage. And that decision is complicated when mortgage rates are rising. Moving might mean giving up a low-interest rate for a higher one. Assume a couple has a 7 percent mortgage on \$200,000, a 5 percent loan on exactly the same amount would cost another \$4,000 a year. If they took a variable rate mortgage and rates continue to climb, the difference could be quite substantial. (An easy way to run the numbers for a variety of possible scenarios is to use a Web mortgage calculator like the one at money.com.)

In the Sengens' case, interest rates have and will rise 2 percent while they decided they might want to build a new home but not, by early February, interest rates had risen to 9 percent. Since the Sengens plan to take a \$400,000 construction loan, the difference between 7 percent and 9 percent will have cost \$302,000 by the end of the 30-year term. "And the mortgage we're cur-

rying now is only 70 percent fixed," Mary laments. Yet even these numbers can overstate the expense. It's unlikely that the Sengens will actually stay in their new home for decades. Assuming they move sooner, they'll wind up paying just an extra \$34,923 annually, and the lion's share of those early payments will be nondeductible interest. At a 34 percent tax bracket, that translates into less than \$1,200 a year.

But while a mortgage may cost less than it appears, transaction costs always add up to more than either buyers or sellers expect. Take insurance, an insurance, a home inspection, the bank's survey—when you live, these fees add 3 to 6 percent to the cost. When you sell, the price of a survey, yet another survey, the broker's fees, plus any transfer taxes charged by your city or state can turn your selling price by as much as 10 percent. In these high costs of getting "in and out," that can cut into the potential profits of a real-estate deal, making the move more costly.

In the end, the decision to make over your home or make over your life is a personal choice, and that's largely up to money. As of mid-February the Sengens were still debating. "We'll use the plan for the new house now and, we'll have to make a decision by the end of the month. We still don't know where we're going to go," Mary says. "Sometimes, I wish the house we are in now would just fall down so that we could afford right here."

www.ew.com/1998/03/01/finances/0301finances.htm

HOW MUCH IS THAT PER MONTH?

With the shrinking but real estate market in metropolitan areas over the past few years, shoppers have to be patient to jump quickly when they see the right houses. It helps to know how to do major mortgage math in your head. Try this simple trick for estimating monthly monthly costs:

You probably already know about how much cash you have to spend (\$100,000), for example. Subtract about \$5 to 8 percent of the house's price (less, \$10,000) to pay for closing costs, and you have your down payment amount (about \$91,000).

Subtract the down payment from the house's price (\$200,000, for example) and you know what you need to borrow (\$100,000). Knock those zeros off the end of that figure (\$10).

Next, turn the house into into a dollar figure—converting \$100 into \$10, for instance. Then multiply \$10 by 100 and you have a rough estimate of your monthly loan payment (\$100).

To add property taxes into the equation, you'll need a calculator and some information from the realtor's fact sheet.

Multiply the property tax percentage (less, 2 percent) by the assessed value of the house (perhaps \$225,000) and divide by 12 (monthly payment). (\$225,000 x .02 x \$225,000 ÷ 12 = \$375 per month). Add its insurance (typically \$10 to \$100 per month) and you have a pretty good idea of what that new house will cost each month, about \$1,275 in our example. —Jeff Carter

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A Sense of History

From refurbished stoves to vintage-style hardware—products and ideas to build a period look into a renovated kitchen



A number of sources work to create an Art and Craft flavor in this newly renovated kitchen: a soft, glowing plaid rug with open shelving on brackets, a vintage-style sink and ceramicware made from clay, green glass pendant lights, and handwoven maple drawer pulls.

BY TERRY TREBOSO

Years of old houses love to talk about preservation. But you rarely hear talk about a vintage kitchen feasibility restored to its former glory. The house houses we love, with their thick walls, surprise moldings, and architectural flourishes, did not have the kinds of kitchens we expect today. Historic kitchens are suspended kitchens, inefficient and poorly laid out for modern day needs. In a typical pre-war model, everything was freestanding: the behemoth of a stove, the sink on partition legs, the servery, a table that doubled as a work surface, a stepback cupboard to store the china—if there was no butler's pantry. Kitchens were work areas, plain and simple. And those modified to the 1930s, '40s, or '50s often held even less appeal than their forbearers. The counters, flooring, and ceiling materials in them were rarely as attractive as the hardwoods, linoleums, and metals they replaced. Appliances came in dismal blues, the avocados and banana greens that, for good reason, have never survived in taste.

Today we want to capture the flavor of the kitchens we imagine our grandparents loved: homes warm and filled with the aroma of good cooking. Fortunately, replicating the mood of a vintage kitchen, or an existing space or an old one, has never been easier. An demand for kitchens brings with it a patina of age has grown, as has the availability of period materials, architectural salvage, and well-designed reproduction hardware and appliances. Resources for old-fashioned pieces can be found by perusing advertisements in many home-design magazines, visiting at local antique shops and architectural salvage companies, and browsing the Web.

STORAGE SOLUTIONS

A major concern for most modern day households is storage. Kitchens of yore may have offered little storage in the work area itself, but larger homes usually had a separate walk-in pantry, a butler's pantry, and, in very old houses, a buttry, where flourboards, spouts, and preserves would be kept. The strict division of rooms to be stored is a tenet way to think of how and where

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to position cabinetry—either in the kitchen itself or in an auxiliary space, such as a pantry.

Cabinets, more than any other single element in the design, determine the look of a kitchen. To give a kitchen a historic feeling, architects and designers can focus against filling the kitchen with modern built-in, rather than silicones or "softline" look, a mix of pieces with different finishes. Architectural salvage companies, such as Urban Archaeology in New York City, and Antiquarian Antiques & Interiors in Philadelphia, often stock vintage cabinets in wood or metal, which mix well with free-standing antique or reproduction pieces, such as a Welsh dresser or a dry sink, and with more-casual items like pine racks and open shelving. Purged wood cabinets may warp when stripped, so you might want to try one cabinet door first. Metal cabinets should be stripped, buffed, and lacquered to prevent them from rusting.

If you decide to go with all-new cabinetry, be aware of the signature design elements of the era you are trying to recall when you make your selection. Kitchens built between 1880 and 1930, for example, often featured Shaker-style cabinets, with plain, hor-

izontal panel lines (no lip) on the doors. Some designers who value authenticity over emotion specify base cabinets that go straight to the floor, for an appearance by resembling simple-dine cubboards for storage or display and cabinets with a toe kick or work areas.

SURFACES TO CONSIDER

Stone countertops are compatible with old-fashioned kitchens—long as the stone is honed to a soft finish. Vermont soapstone is one popular choice. Concrete, subtly colored to look like a granite base, is a contemporary alternative to a natural material; concrete is durable as long as it is sealed.

For flooring, architects and designers usually recommend hickory. Laminate, made just for prints, is making a comeback. Imported versions, including in clean tiles, have never been more beautiful or practical. Colors and patterns range from pale, natural designs to intense, beaded-banister, high-color motifs. Glazed rolls of vintage linoleum from the '20s to the '50s can often be found at antique companies or at specialty stores like See's, in Brookline, Mass., or New York City.

Many homeowners today want to simulate the look of their great-grandparents' kitchens.

You can also install a mosaic tile floor, which takes its inspiration from kitchens dating from the 1820s through the '40s, particularly black-and-gray and white checkered or houndstooth configurations, or all-white hexagons, "checkers were" designs. Use white grout for historical accuracy; gray grout, a popular choice today, obscures the tile.

On the ceiling, purged metal is handsome, particularly when left in its natural state. As an alternative, try heavy antique brass or a cream-colored wallpaper embossed in a variety of period patterns. It is less expensive to install than purged metal and, once painted, achieves a similar effect.

LIGHTING EFFECTS

Even though they were not used in old houses, most designers recommend under-cabinet lights because they provide direct, but efficient, task lighting. Vintage-style bellied lamps and chandelier lights have a period appeal when hung over islands or traditional backslashes. Carrage or terra-cotta lanterns look well in walls, especially in a cozy dining alcove.

OLD STOVES, NEW ROOFS

Finding period-looking stoves—and, occasionally, refrigerators—became easier in the mid-1980s, when the country look was mainstream. Heartland and范围, two Canadian companies,

make new stoves that simulate the look of our grandparent's—complete with painted Queen Anne legs, whitewash nests, cast backs, and lots of chrome. Granite old-gas stoves are available from a number of sources, such as Antiqua Stone-Bilters in Los Angeles. The stone, which shape, usually has a streak of "the Magic Chalk," among others, on hand. All stoves are refinished and retrofitted so you don't need to light a match every time you turn on or off. Though these old stoves are white, some occasionally turn up in cream, green, or yellow blues.

Hoods are another story. Since they weren't standard 100 years ago, it can be difficult to find one that will blend with a refinished stove. The most common approach is to face the hood of your choice in wood and integrate it into the upper cabinet. A metal hood should be custom designed to complement the range over which it hangs. Or install a retractable downdraft hood, when not in use, to almost never to disappear.

HARDWARE, THE FINISHING TOUCH

Vintage-style hardware, whether old or reproduction, is the finishing touch—preferably for the period-kitchen hardware. Purge pulls are the popular choice. Make sure the finish is authentic. Designers suggest refinished brass, antique brass, and satin nickel. Or try a blackened finish. As one designer says, the hardware will look as if it's been there for many years. Just like your kitchen. ■

PHOTO BY JEFFREY L. KLEIN FOR ENHANCEMENT

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MATERIALS



All Bark and No Bite

Stripped off Mediterranean oak trees, cork is soft, warm, and easy on the feet.

BY JEANNE BUBER

Cork is a truly endearing, fragrant gift of India, dogs, and damp, crinkly bark. And it's a cinch to clean. Cork is the perfect flooring. "It's hot," says Peter Collier, who sells a variety of materials for floors at the Environmental Floor-Guru in Seattle, but due to its natural cork is fire-resistant and living room. "It's a beautiful material. And because of the outer surface, you can even drop a wine glass and it might not break."

Cork is also easy to love because it's environmentally friendly. Made from the thick, spongey bark of the cork oak, Quercus suber, which grows in the arid regions of Portugal, Spain, Morocco, and Algeria, cork is a completely natural, renewable resource. Hermès simply pol-

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MATERIALS

the bark off in thick slabs, taking care not to damage the living tree underneath. Then after the next one to two years, the tree grows a new skin thick enough to repeat the harvesting process. As an environmental bonus, the cork industry helps preserve forest cover in nearly 5.5 million acres that would otherwise become desert. Portugal, the producer of half the world's cork, tightly regulates harvesting schedules and has made it illegal since the 1930s to cut down cork-producing trees.

The harvested pieces are cleaned, boiled, and stripped of their rough outer surface. Wet cork, the most pliable product, are bound flat, leaving the slate-looking-like pieces of Swiss cheese. Some of the scraps are ground into granules and sold as insulation; others are used for shoe cushioning and as musical instruments. Most of the leftovers, though, become flooring.

To produce the various patterns and shapes of floor covering, manufacturers take cork granules and mix in a small amount of glue; these compact the cork into 3-foot-square blocks, from which tiles or sheets are cut. By varying heat and adding dyes, factories produce different hues, some light or straw, others darker or walnut.

Cork flooring is both durable and forgiving because of its molecular structure. Its packed structure is composed of minute, irregular, 14-sided cells—approximately 40 million of them per cubic centimeter—that have no interior and walls of flexible wood. When you step on cork, the air in the unevenly packed cells mostly compresses, then springs back when released.

In the 1920s and '30s, cork floors became popular for both homes and businesses. Since 1991, a Midwestern representative for Natural Cork,



Harvesting in Portugal, Portugal, a panel slice of cork oak bark while avoiding damage to the wood of the underlying tree.

based in Augusta, Georgia, reports that cork was second only to hardwood as a flooring choice during that time. But in the mid-1990s, cork fell out of favor, pushed aside by wall-to-wall carpeting and lyocell's need to be mated by hand, an arduous chore. Luckily, importations with vinyl coatings didn't work, Keen says, then in the late 1990s, some lacquers introduced an especially durable polyurethane finish that holds up, and thrives with, cork. A new generation of flooring was born.

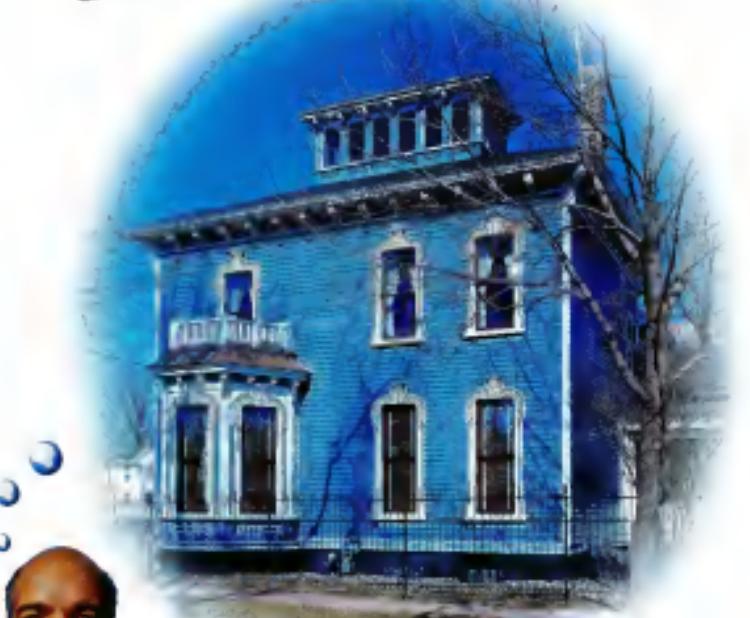
Today, the options include solid, solid or Re-tight-grained one-foot squares, and laminated Cork-tileback planks, 3 feet wide and 3 feet long. Both types cost at about \$4 a square foot, but tile is the most expensive to install. First, the cork or plywood substrate has to be leveled through the thin squares. Then the tiles are laid side-by-side using notched trowel on a thin mortar. The thicker planks, which are actually tongue-and-groove medium-density fiberboard sand-coated between layers of cork, are glued together at the edges instead of adhered to the underlayment, to the relief of "Terry." "They're so easy to install! It's almost as though," says Colborn, who chose planks for over old未经处理的 flooring.

Both styles come either bare or prefinished. Acrylic, more commonly used as a coating for cork, requires the most frequent renewal—as often as once every four to six months. But applying a new coat is easy: just snap it on. Polyurethane lasts longest, though it eventually wears through in about seven years; the old finish must be thoroughly sanded to ensure the new coat will stick. The final choice is up-lit-foamed cork, which is mixed in epoxy and finished with oil. Although wax requires reapplication once a year, Colborn chose a few for his floors. "I felt really nice next to bare skin," he says. *



Photo by Gary Tissel (bottom left) and James G. Smith (bottom right)

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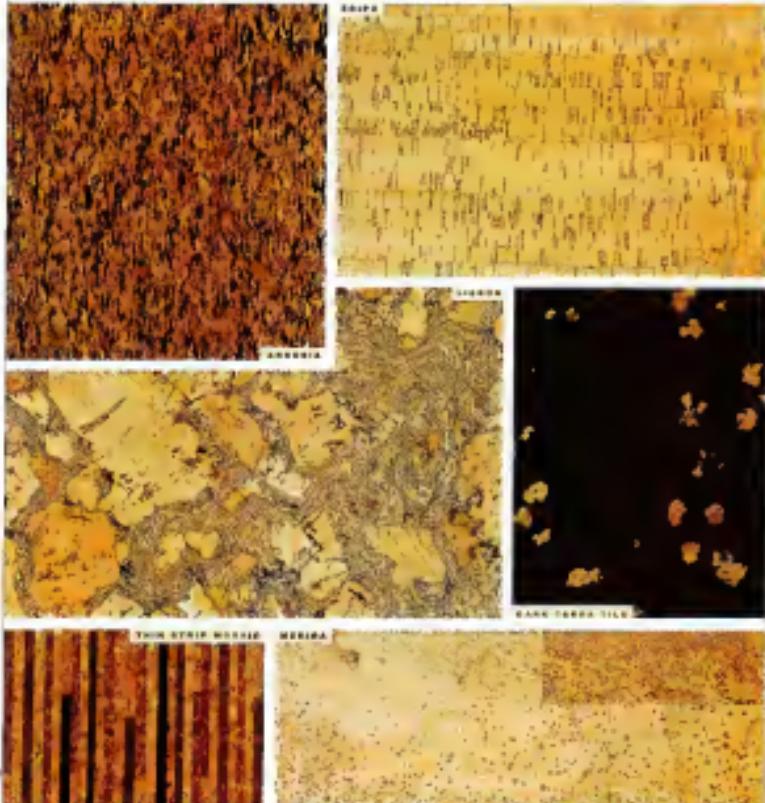


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Now We're Cookin'

Microwaves were touted as revolutionaries when they were introduced in the mid-1960s. And while those bulky boxes have gone smaller over the years and have become fixtures in the American kitchen, they're used mostly for defrosting and reheating. "Microwaves are fast," says Eric Fidell, associate chef at the Culinary Institute of America, "but they don't caramelize food, which is what causes browning." Now, one manufacturer is offering an oven that merges microwave speed with the cooking efficiency of convection and broiling systems, affording better taste in a fast-cooked meal. The convection oven has also evolved: A new soaped-up version channels hot air directly at food, reducing cook times by up to 75 percent. Yet all this innovative cookware in such a hurry—slam-bang—can enhance the flavor of a dish. New steam ovens prevent food from drying out by humidifying the cooking chamber, and at-home wood-burning ovens impart a smoky flavor to everything from chicken to pasta. With so many options, choosing the oven for a new kitchen might be even harder than deciding what to serve at a dinner party.

BY JORDAN REED



Decor's commercial-style range features the first dual-fit system, combining a gas burner, infrared preheater, and stainless steel cooktop with a standard oven.

WHIRLPOOL'S JETBLAST: Improves the convection oven with a spinning air system that circulates hot air directly toward the food, as well as automatically converts stovetop burners into broiling. Price: \$1,599. Available at whirlpool.com.

WHIRLPOOL'S SPARKCOK: Produces a fluffy baked potato in 12 minutes and a tender 80-pound chuck roast in 4 hours.



ON THE WEB

www.whirlpool.com
Check out this site for juicy info about what you never thought possible on the front of a kitchen cabinet, cooktop, and griddle. You'll find lots of mouthwatering recipes, informative cooking tips, and lots of ideas for tailoring a kitchen design to your needs.

www.deltafaucet.com
The Whirlpool Kitchen & Bath Association's website provides links, tips, and information about new remodeling and renovation projects for tailoring a kitchen design to your needs.

PHOTO: WHIRLPOOL



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TALKING SHOP



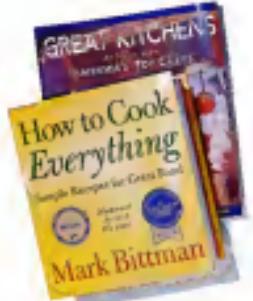
Now We're Cookin'



Baking can dry and fail. But Geppert's new oven infuses moisture into the crust. (Cheesecake, purchased at Joliette Shaffer Bakery in Laramie, Wyo.)



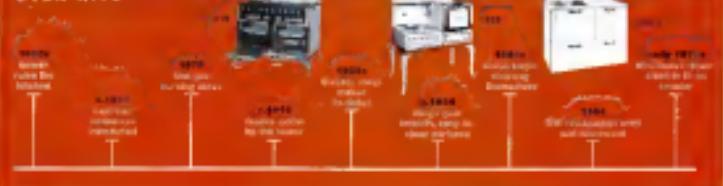
For outdoor cooks in the Adirondacks, Dan's Baking does everything the old-fashioned way—without the use of a mixer. For example, the dough is kneaded by hand, and temperature is measured by a digital thermometer.



"If you're baking a soufflé or a loaf of bread and add just a bit of moisture, you'll wind up with a beautiful crust—a steam oven gives you that option."

—ERIC FREDRIKSEN,
ASSOCIATE DEAN FOR ADVANCED CONFERENCES,
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OVEN RITS



PHOTOGRAPH BY JEFFREY L. HARRIS FOR TIME; CHAR-BROIL PHOTOGRAPH BY JEFFREY L. HARRIS FOR TIME

Good Books

New in Cookin'
This 100-page issue—written by New York Times food columnist Mark Bittman—contains more than 1,000 recipes for anything you want to cook, from basil pesto to spaghetti (French-style Macaroni Gratin).

Great Kitchen: All About Your Oven
An extensive picture-filled glimpse into the cooking and eating world of 30 renowned culinary experts, this book is a great resource for anyone who's reinvigorating his/her kitchen.



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When the compact disc came along 16 years ago, in clean, crisp digital sound and unerring fidelity instantly sound my record player and dog-eared albums into irrelevance. I figured that recording technology had pretty much reached the pinnacle of sophistication. Well, the digital revolution that threatened every other form of art has now created new divisions that may render CDs obsolet and make your Walkman go the way of the 8-track.

Cardinal audio formats) MP3, a digital audio format that compresses music files into sizes that fit a music library onto a CD, without any loss of sound quality. Developed in 1991 by the Fraunhofer Institute (the Morion Digital Experts Group Audio Layer 3), in case anyone wants to know, MP3 quickly became popular among college kids and teenagers looking for an efficient way to download music off CDs and pass it around over the Internet. File file exchange was made possible because MP3s, unlike computer software, is an open format, so songs can be copied endlessly without regard for copyright laws. Not surprisingly, that made MP3 a dirty word among record industry executives. For many of us, though, listening to music on a computer is on par with watching



Sony's Memory Stick Player stores up to 40 minutes of CD-quality audio on its built-in 12MB flash memory card.

第10章 工業化 EARTH 工業 TAKA

Hip Chip

On the job site, or off, portable MP3 players deliver CD-quality sound without the skips.

第十一章 中国古典文学名著

Luminescence of *Acinetobacter* on a 1.0 mm black-and-white TM

That all changed in November 1998 with the release of the first portable digital music players. These sleek pocket-size devices, commonly called MP3 players, are a hybrid of a cassette tape player and a portable CD. You can record songs and get hours

humidity more than can be taken and played separately. Instead of spending a tape or spending a lot of time, play it once more than the humidity drops to reasonable, consider each listener in their memory capacity. These stacks of game size pieces of plastic are capable of holding up to 65 megabytes (MB) of digital data. As a rule of thumb, one minute of music contains about 1.5 MB of memory, so you get about an hour of listening time per card. (It's possible to trim to 30 seconds, but you'll sacrifice quality.)

The biggest plus with feature of MP3 players is that they have no moving parts (they're solid state), so they will never skip or flutter. That makes them ideal for a pic in the park or a Ta Ta work-out, where a standard CD player often skips or messes with your heart. Surprisingly, though, there are only those

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To load music into a player, you need a PC with a CD drive and 64MB of RAM or more. (Only the Razer is Mac-friendly.) Once you're hooked the player up to your computer with the cable provided, there are two basic ways to copy a song, in either from the computer's CD drive or via the Internet. In the first instance, you can rip one of your own CDs into the computer and convert the music into the MP3 format, using software that comes with the player. There's a simple option to transfer the audio from the computer into the portable unit. Copying Van Morrison's three-minute song, "Brown Eyed Girl," for instance, can be done in less than a minute, transforming the song from the computer in a few seconds. You can load a player with approximately 15 songs at about an hour. The second method involves downloading music from Web sites such as MP3.com and Lycos.com onto your computer, and then transferring it to the player as above. The speed of the download depends on the speed of your modem. Mine is a suspect 56K, and downloads often take twice as long as that result.

There are about three dozen makes of MP3 players. The reigning king, the Razer 300, is roughly the size of a deck of cards and boasts 4MB of built-in memory plus a slot for adding an additional 512K (\$16) or 32MB card (\$180). Other players offer FM receivers, clocks, and built-in

models that come with a clip—Diamond Multimedia's Raze 300 (\$369) and Raze 500 (\$429), and Sony's new Internet portable Viao Music Clip (\$299). And they take up power. A typical player can run for 10 or more hours on a single AA battery.

To add music into a player, you need a PC with a CD drive and 64MB of RAM or more. (Only the Razer is Mac-friendly.) Once you're hooked the player up to your computer with the cable provided, there are two basic ways to copy a song, in either from the computer's CD drive or via the Internet. In the first instance, you can rip one of your own CDs into the computer and convert the music into the MP3 format, using software that comes with the player. There's a simple option to transfer the audio from the computer into the portable unit. Copying Van Morrison's three-minute song, "Brown Eyed Girl," for instance, can be done in less than a minute, transforming the song from the computer in a few seconds. You can load a player with approximately 15 songs at about an hour. The second method involves downloading music from Web sites such as MP3.com and Lycos.com onto your computer, and then transferring it to the player as above. The speed of the download depends on the speed of your modem. Mine is a suspect 56K, and downloads often take twice as long as that result.

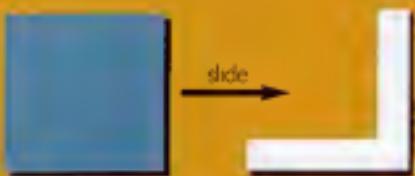
As you search the Web for music, you will quickly discover that MP3 is not the only digital-audio format available. Some other formats such as Liquid Audio and Dolby Digital even offer protection against unauthorized copying. The problem is that these formats are not interchangeable and no one player can access them all. My Raze, for instance, can't play Microsoft's Windows Media Audio tracks. While there is talk of an industry standard and new software that will enable players to skip into multiple formats, nothing has happened yet, leaving MP3 the de facto standard.

Currently, more than 1 million portable digital music players have been sold, and each of them are MP3 compatible. The numbers are expected to increase 3.5-fold in the next three years. You can get MP3 players for over \$100 and software that turns your palm-size organizer into a digital player. But until manufacturers agree on a standard that allows MP3 devices to access all the music on the Web, they will remain more of a complement to your current CD player, better suited to use on the gym than as audio equipment for serious listening. ■



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A new finish gives a porcelain tub a second life

BY RICHARD WEIN



W

hen moving out my current apartment, I was immediately drawn to the vintage bathtub a renter had left when bathing was several showers described me. But my Clinton crockery tub—iron and the only galley along its bottom, the work of a persistent leak that had eroded the white porcelain and exposed the tub's iron shell. The building's super presented to fix it—and fix he did, by slipping on some latex paint that flaked off every time I scrubbed it for a warm bath.

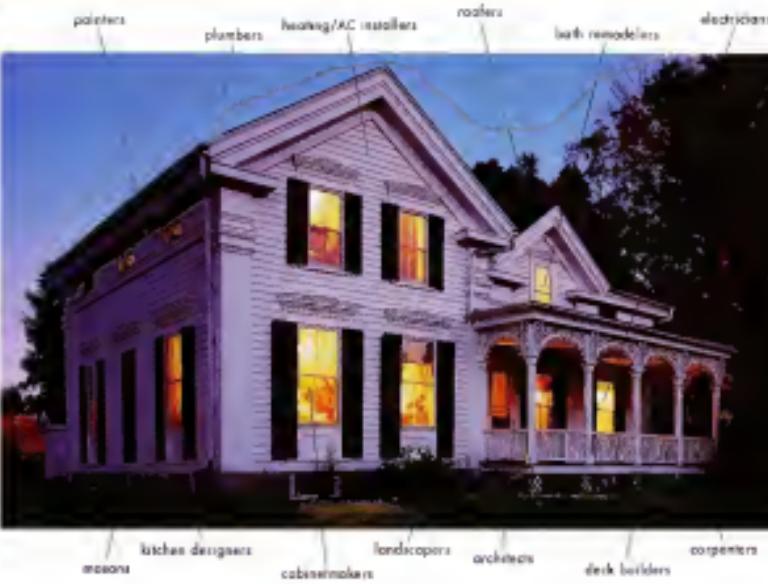
The rep's methods were suspect, but he was essentially on the right track in trying to save the tub by recreating its surface. "People very often strip old tubs because they're slightly blanchard," says Richard Therhoney, T.O.H. plumbing and heating expert. "But it's not easy to find an affordable bathroo

average cost of \$350 to \$500—in fractions of the \$1,200 to \$5,000 expense of a new cast-iron or steel tub installed—unless you can make an unique feature look brand new. "Repainting a tub

can be a cost-effective solution for that retro look," Therhoney says.

That's what Judith Metropoulos chose to do, and hired Scott Apers, a technician for the Miracle Method franchise in Ludlow, Massachusetts, to resurrect the old cast-iron bathtub in the 1929 house she and her husband, Marc, own in Longmeadow, Mass. Their second-floor bathroom has a mix of old charm and new style, but the mounted oak looks and looks mismatched, with a green water mark under the faucet, several rusty stains on the top, and a dull, gray texture from years of improper cleaning.

To prepare the tub, Apers first creates a wavy tub caulk between the tub and the walls and floor with a pony tool, then removes the drain cover and masks off the faucet. The edge of the caulk will be hidden behind the offset faucet and a new head of caulk. Next he places the tub in reverse the important that can hinder adhesion of the new finish. He stripes off soap scum



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Apres, a Somer's one-step sealer, reduces time using many of the same techniques for coats used on powder. In this stage, he fills gaps and scratches with powder (left) and then the finished product becomes a power buffer (center). Before applying a fiber breaking coat over the interior surface, he necessary may re-sand after the initial finish worn past the old scratches.

with a razor blade, then wipes an alkaline solution commonly used to strip wax off floors. He follows with an acid-based cleaner that neutralizes the scratches, and after rinsing and drying the tub, rubs it clean with denatured alcohol.

Ayala, a former auto-body repairman, smooth fiberglass parts with deep chips and scratches, just as he would do a damaged car door (had the tub been severely cracked by cleaning with bleach, he would have had to paint the entire outer surface.) After the fiberglass hardens, he sands it with a coarse 36-grit paper to knock down high spots and an 80-grit paper to finish it out. After the fiberglass is dried, he sands it with a polyester glazing powder, waits for it to set, then sands it on the same manner.

After working with a tack cloth, he bags a bonding agent that enables the acrylic sealer to bond to the porcelain's glazed surface. Many refinishers don't snapshot up the tub's surface by brushing on a solution of hydrochloric acid before using a bonding agent. Critics of acid caution point out the acid must be properly neutralized before being washed down the drain or it can damage pipes, as well as the environment. Miracle Method's proprietary bonding agent eliminates the acid-washing step.

As the bonding agent on the Metropolitans' tub sets, Ayala strips it on a Tivak tub and strips it on an acrylic can never strip a porcelain so that it does not whole point vapor. Using a spray gun, he applies three coats of acrylic over these essential, letting each dry for 10 to 15 minutes. With the help of a heat lamp, the finish coats on above are then sanded with 3,000-grit paper smooths bumps and rough patches. After he does off the surface with paper towels, he goes over it with a power buffer equipped with a foam pad and stone wire compound to remove any scratches. Finally, he hand buffs the tub in a shiny layer with a soft cloth and polyester glaze on score. Eight hours after removing at the Metropolitans' house, his work is done. They'll be able to step into a bath later that night.

Miracle Method, like many refinishing companies, offers a five-year warranty. But says David Baldwin, co-owner of the franchise that franchises Jackie's tubs, with proper care and maintenance (porcelain tiles and bleach-free cleaners only), a refinished tub surface should last 15 to 20 years. And while that's a few years short of the life decades you can expect from new porcelain, it sure beats buying a tub that will never be hygienically surfaced. ■

The glazing pearl finish on the Metropolitans' 1515 tub should last about 12 years.



GOOD AS NEW

Refinishing may be the most practical way of renewing a built-in bathtub, but it's likely enough to have it removable sheet-rock tub or cast-iron tubs, the direct heat being used to glaze it a new finish that matches the bathroom's style of the old one. Custom Casting Company, of Louisville, Illinois, is pioneering a method to recondition tubs in a furnace, the same way these fixtures get their original glossy skin. The process involves sandblasting off the old

grit, then baking on a new ceramic coating at 1,400°F for about two hours. "It's genuine porcelain enamel, the same glaze coating used on fixtures you buy in stores," says owner Ross Kappeler. His company has already successfully restored sheet-rock tubs for about \$350 to \$400. (Cast-iron fixtures, like tile and pedestal sinks, can't be refinished.) The cost to treat a bathtub should range from \$600 to \$1,400; shipping will be extra.

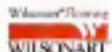
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the details

BY LIZ REYNOLDS

There is no happier sound than the patter of little feet—up to a point. When the patter turns into thunder, and little feet (as well as big ones) begin to leave scuff marks on the stairs, it may be time to install a runner.

Prior to the mid-19th century, when high-crowned looms were invented that could toll carpet out in bulk, it was too precious to walk upon. Rugs, imported from Europe, were expensive, most were placed on tables. Soon thereafter, however, stairs began to be covered with reversible strips of ingrain carpeting that displayed intricate patterns on both sides. Today, most runners come in 20- or 27-inch widths and in a wide variety of patterns, the choice depends on how much of the stair you want to cover.

Certain weaves will better on stairs than others. Densely woven five-gale or tight-loop carpeting of pure wool or a wool/nylon blend is more practical than that made of sisal, rayon or polyester, which wear thin faster, because they do not withstand abrasion well. The most durable—and most expensive—carpet is a Wilton, because it is woven all of a piece through the backings material. Wool broadloom can also be cut to the width of a runner and bound along the edges. With the right fiber and weave, a securely installed runner should still be going strong, even after the little feet have grown big.

treading LIGHTLY

Protect your stairs with a runner

PHOTOGRAPH BY JEFFREY L. COOPER FOR FURNITURE.COM

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the details

stair runners

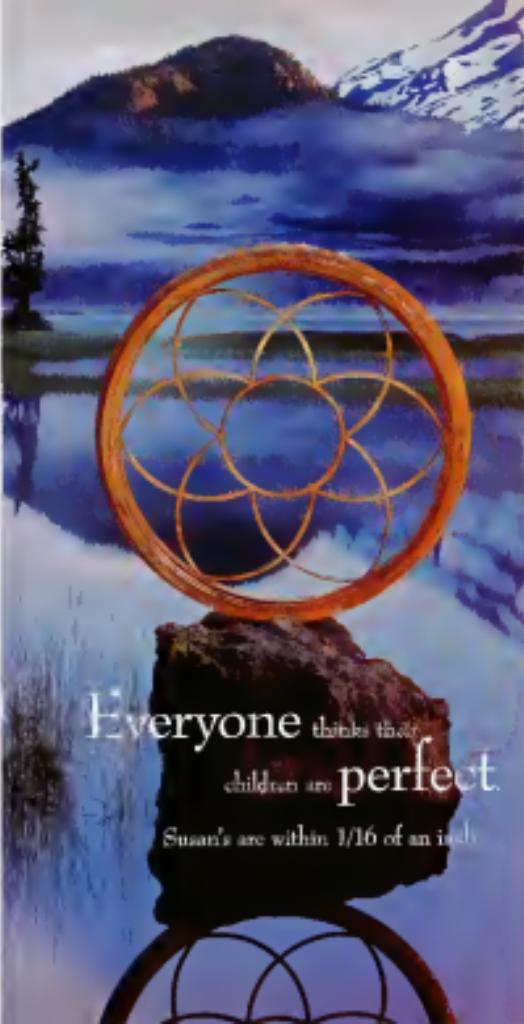


Rods and Clips

Even though a runner cannot be pinned and glued to wood handrail strips where stairs meet, install a broad (one step by step on page 108) carpet runner underneath the use of stair rods or clips for additional support—an as well as for decorative interest. And rods come with three pieces: the tubing, a pair of supporting brackets, each of which is attached to the rear and front, and brackets to slide them off. Stair rods (like those from Braden's and Stark Carpet) were used during the Victorian era. They are fitted in place, then posted to slide over the edge of the runner.

TOP TO BOTTOM
Stair's all-around
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the details

stair runners



PADDDED ATTRACTIONS

Carpet is thick padding, no underlay, to help insulate the life of a runner, rather than a thin or inexpensive underlayment, which can weaken the underlayment. Some installers employ a little to increase a carpet's longevity. They fold an extra thickness of carpet against the bottom stair. When the carpet begins to age, the piece is unrolled and the entire runner is pulled up and reconstituted to distribute the wear.

PHOTOGRAPH BY JEFFREY L. BROWN

Step-by-Step-by-Step

To calculate the length of a runner for a given set of stairs, such as those in a house in Water Mill, New York, measure a tread, multiply by the number of steps, then measure the riser and multiply again. Add the two figures together, then allow as 2 feet more as a margin for error. Extra padding will be required if stairs take a dramatic turn and if there are any landing flights in the length of connecting hallways, if necessary. A stair runner needs to be checked periodically to make sure that neither the staples nor tacks (nor the rods or clips that hold it in place, if any) are coming loose. Because of foot traffic, a runner may require a little extra vacuuming to keep it looking worn; the edges are notorious buff-corners.

1. Carpet installer John Cavanaugh installs "tuckers" where the treads meet the riser. The tuckers are a strip of wood with notches like "putting pins" that grab the runner and help hold it in place. (This comes in several lengths, depending on the thickness of the runner.)

2. Cavanaugh measures, cuts, and applies pieces of felt-base-and-pile padding to each tread, leaving the tuckers exposed.

3. Stair carpet is installed from the bottom up. Using a hammer and a head, Cavanaugh drives a flat of the runner from Woodland Woods, into the gap between the floor and the bottom step and then staples it in place.

4. A band of latex glue is each notched fiber across the runner as it is stretched between tread and riser. As installation progresses, Cavanaugh pushes a couple of staples into the edge of each notched and a row of staples under the nose of each tread to finish the job off.



BRASS, STEAM, AND GLORY

by Capt. James J. May, R.N. (Ret.)

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Leech M. Coffey, St. Andrews Bay, 1859



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LETTER FROM **THIS OLD HOUSE**

Practical Design

BY HOWARD ABRAM

bold, I chose a traditional two-story Colonial, a style that fit perfectly using the historic bones of my open Boston suburb. With its steep, lower 12-foot pitch, cedar roof shingles, and wood clapboard siding, it looked exactly like what I had come to consider, after a lifetime in the Northeast, to be a classic old house.

T

en years ago, when I started planning the house I would build, I chose a traditional two-story Colonial, a style that fit perfectly using the historic bones of my open Boston suburb. With its steep, lower 12-foot pitch, cedar roof shingles, and wood clapboard siding, it looked exactly like what I had come to consider, after a lifetime in the Northeast, to be a classic old house. But this design actually evolved over many years, under the firm Massachusetts sensibilities discovered which building methods made most use of the abundant materials around—namely timber—and would best protect against New England's harsh winters. Over time they exchanged shingled roofs for steeper wood ones, and gave them steep pitches or sheathed off the heavy piles of snow. Their tightly spaced wood clapboards were easier to nail than flat bricks, and did just as good a job sharing out the icy winds. These wood houses, which were born of practicality, looked frumpy like the cheap memory tins the colonists had left behind in England, but it didn't take long for them to dominate the new camp.

Jan Wendorff's California bungalow is quite different from my house, but Colonial houses like hers were also shaped by the houses they needed to serve and the materials at hand. The steep roof gradient and deep eaves may be interesting to look at, but they were intended to shade the inside of a house from the hot sun and allow the windows to cast a shadow across overexposed living spaces. On many buildings, finely crafted interior and exterior woodwork celebrated California's native timber, which seemed to be an endless supply in the early 20th century.

This house form continues to be modified, influenced by our growing understanding of how to fight-off severe—the erosion most. As contractor Steve Crawford works to bring the Jan and Carla's bungalow the 21st century, he is trying to reuse original details while incorporating new materials and construction techniques that developed in the last century in response to natural disasters and our concern for a dwindling resource. He's replacing wood shingles on the roof with shingles and then on the soffit with fastened asphalt to meet local codes that address the fires suffered regularly in Santa Barbara's hills. And he's raising the eaves and raising the windows will be made from an environmentally friendly composite wood material rather than old growth redwood.

But before not rejecting tradition, let's take a look at its ongoing evolution. People may say that there's no place for certain changes or, even better, that we as Americans, but 100 years from now, when all Santa Barbara houses incorporate these elements, they'll most likely be considered an essential aspect of the style—just as I regarded the pointy wood roof as a vital feature of New England architecture after I had studied the landscape for two centuries. (We've learned over the years, in doing a house so that it can take advantage of technological advances and design in environmental context, be it wind, sun, sunbathers, or flood, doesn't have to compromise its design. It will more likely drive it to new heights.)

PHOTOGRAPH BY SHELLEY METCALF



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BY KELTON HENDRICK

Contractor Steve Crawford didn't expect to unearth a code-perfect concrete foundation under Jan Winstorf's house. This Old House's latest winter project. But what he actually found—a 93-year-old mélange of unreinforced concrete, crumbling old brick, and hollow clay tiles dug just six inches into the ground—left him stunned.

"Most of the footings were either dust, or nonexistent," he says, eyes bugging out of his head. He doubted they would support a house of cards, much less a new second story. Crawford and architect Jerry Zimmer quickly conferred. Their solution? Dig out and re-pour about eighty percent of the foundation.



Even the deepest joists that grace Jan Winstorf's front steps get negligible protection from these debris's roots (LEFT). Rubber fitted onto the four corners of the hollow concrete block dramatically improves the joist's strength, so it will be less likely to break when the earth moves.

To learn more about the seismic enhancement of the Santa Barbara project, check out www.thisoldhouse.org.



A structural engineer who specializes in seismic resistance inspects reinforcement installed every third column and beam for the Roche's new home.

- Post-tensioned hold-downs transfer the loading to the foundation at the end of the shear walls
- Beam connections transfer the vertical load to shear walls
- Parabolic columns transfer vertical and horizontal forces between studs, shear joists, and rafters.

PHOTO: ANDREW KELLY; ILLUSTRATION: ROBERT L. BROWN

No house can stand for long if its base of support is inadequate, especially in California, where the ground has a nasty, recurring tendency to move around it. In 2008, a native California who grew up building or destroying houses when he was a boy, John Roche, had to move his home because the地基 (the soil he'd built it on) had shifted and cracked. John's wife, Linda, had given him a chance to move to a new foundation. "I knew it's necessary, but I didn't know that it was really necessary," she says.

California doesn't hold a monopoly on dangerous earthquakes—or the need for steady foundations. In 1811 and 1812, New Madrid, Missouri, experienced one of the strongest series of quakes ever to hit the U.S., and in 1836 a 7.5-magnitude quake hit Chattooga, South Carolina, killing 60 people. Even New York City experienced earthquakes measuring 5.0 or greater in 1757 and 1896.

Of course, the chances of an earth-quake hitting John's house are much higher. Santa Barbara does lie in a Class 4 (highest risk zone), a fact made clear in 1925, when an massive shock triggered most of the brick buildings downtown. Many wood-framed residential structures in the surrounding hillsides survived, including John's 1897 bungalow. But building codes implemented in the late decade now require stronger foundations, thicker framing connections, and better base-to-foundation anchoring to guard against future destruction.

These codes are based on engineering principles known as lateral load design. To understand them, consider the forces exerted on a wood-frame building, and how the building reacts to them. Under normal circumstances, gravity acting on the weight of the building is a constant, stable, and predictable force, moving in one direction—down. The house's wood frame acts like a skeleton, transferring the weight of the upper floors and roof to the foundation.

But during earthquakes, as well as in the hurricanes, tornadoes, or floods that afflict other parts of the country, houses are exposed to forces moving parallel to the ground. A building not securely anchored to its foundation can hop or slide right off its base when the earth quakes or shatters or when winds or waves shove it on end. Even if the soil is solid in the foundation so that the structure resists racking or lifting up, small forces can pop the bolts out by one, like buttons off a stretched shirt, causing the house to snap from the foundation and race over. Similarly, if the framing is not sufficiently braced against these forces, it will collapse.

How a House Without Reinforcement Moves

UPLIFT



Diagram: Earthquake that moves up and shear or separation that pull or push against the soil. Effect: House lifts off the foundation or soil separates from the walls.

BASE SHEAR

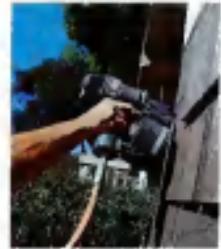


Diagram: Base-to-soil earthquake, cutting foundations away. Effect: House slides off the foundation.

OVERTURNING



Diagram: Earthquake, winds or windstorms. Effect: A house with a brittle soil plate that has had shear forces over shear, but if the soils give off the foundation.



FIRE WALL

In addition to earthquakes, Santa Barbara is prone to forest fires, particularly during the late summer and early fall when dry, hot winds called "fohnwinds" blow across the hillsides, parching every bit of vegetation. Then all it takes is a spark of lightning or an errant ember to turn a moistened slope into a sprawling inferno. Wild blazes are particularly susceptible to a house fire's燎原 effect, and even after the 1989 Loma Prieta earthquake, nearly 1,000 houses in Santa Barbara, the city's last stand of trees not yet razed, were set on fire. Jerry Zimmer, a local engineer, has a theory: "The quakes dislodge trees from the soil and rock, but the quakes themselves don't do much damage to the soil," he says. "It's the trees that do the damage. They're like a giant fan, fanning the flames."

According to the National Fire Protection Association, the most common cause of house fires is faulty electrical wiring. In 2008, the Roche family had a new electrical system installed, along with a new roof, new windows, and a new foundation. "It's a good house," Linda says. "It's a good investment."

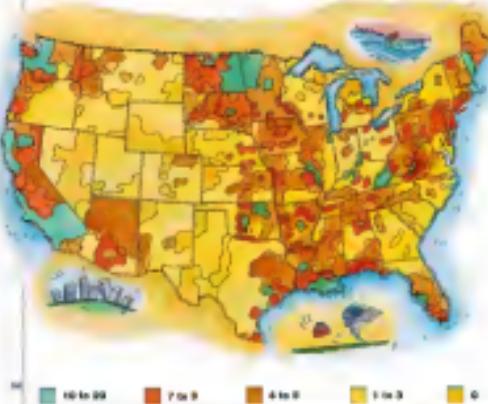
Earthquakes, floods, fires, mudslides—there's a risk people have to live in Southern California's living室. But Weather Watch's *Guide* won't cover it in the West Coast. According to the Federal Emergency Management Agency (FEMA), these have been more than 1,000 major-disaster declarations in the last 30 years—no state has avoided the landslide. Almost half of these disasters are floods, and nearly one out of seven are hurricanes or typhoons. Earthquakes account for only one of every hundred disasters listed.

The shear form of high winds is similar to some of the forces exerted during an earthquake. If these enormous shear forces knock a house down, a window or door will cause pressure changes that literally blow a road off from the inside. Unlike gasoline, in which the

"You can build a wind- and flood-resistant house," says Prentiss. ■

同上卷第100页。

Number of Disaster Declarations Since 1964



Queens College, in New York City
"When everything is reflected from the
translation to the rest, a lesson will be
seen still and mighty there putting
lesson."

In other words, the same techniques that work for nonresidential sites could hold tightly in place during a hurricane. And these methods don't just apply to newer construction. Pending seismic codes allow for retrofitted during a roof or siding replacement job at minimal additional cost. Rerolling or tying a house to its foundation in name only, but not in spirit, at any time. Fixed protection can even move more easily, because it usually involves shoving the house in

but when it comes to territories, with their 200-plus miles outside, all bets are off.

"Hans and Andrew uses make-up until the winter presented difficulties enough to develop a craze," Gandy says. "The best place of advice I can give homeowners is: The easiest job you can do is to keep your paint up."

To help a house resist horizontal forces, lateral load design must hold the structure securely in its foundation or walls. As we saw in the curved leaning castellations, from the inside up to the outside, walls are something stronger than the walls used for floating. A stronger engineer specified more than a dozen different types of galvanized steel characters for joint fasteners. Characters among them are the L-shaped steel brackets called hold down, that serve the function of the studs, and the studs on different floors are in touch with each other. They help to redistribute lateral forces caused by any one spot on the house and send them back down to the foundation, the part of the house meant to carry the burden.

On new construction, sounding hold-downs is reasonably straightforward. Crossfield's concrete subcontractor, Balfour Beatty, took 9-inch-long, 3/4-inch-diameter bolts and struck them 6 inches deep in 12-inch-deep into the firm's crushed rock. Each section of foundation was poured. Granite dry-cast sleepers for all piers were then bolted, secured the hold-downs to them, and then bolted each hold-down to deck slab. Between the first and second sections of the hold-downs—near the first in a column, the other near the second floor—were bolted-to-each other to the respective steel. And when a steel pier sat a pier, and fastening anchors reinforced the connection, there, everything together.

Once these steel ligaments were in place, Crawford sheathed the walls in 7 in. thick plywood. When nailed to the perimeter joists and to the studs in between, these stiff panels create a rigid shear wall that, together with the half-diagonal, keeps the studs from buckling and collapsing in an earthquake. For extra insurance against buckling, Crawford sheathed over the plywood overhangs the division between the first and second floor.

These components of load-bearing construction can also be retrofitted to a house atop an existing foundation. The simplest and least complex of these projects varies, depending on how a shedding, a cantilevered and low-much of the framework is exposed during an earthquake, but most retrofitting in California occurs on foundations on the foundation. Only a small portion of Jim's house was sufficiently stable to be retrofitted, the rest of the house received a nine-poured foundation—16 inches wide, 58 inches deep, and laid vertically and horizontally with steel rebars.



Steve Pollard of Brian House Construction did the retrofitting work on Jim's bungalow. Using a rotary hammer, he drilled 7-inch deep holes for the 9-inch long, 3-inch bolts through the soil plate and into the old foundation. Retrospective typically uses two types of bolts: expansion bolts, which, as their name implies, expand when tightened, grabbing the foundation, and threaded anchors, which set bolts in epoxy-filled holes. Both types have sufficient shear and tensile strength, but on older foundations, where the pressure applied by an expansion bolt may crack the concrete, threaded anchors are preferred.

An epoxy bond becomes as much as one-third stronger when it's set in a dry-hole. Pollard cleaned each one with compressed air and coated them with thin, thin-film epoxy and inserted the metal into place. Threading elements are air-tight bolts that can compress the connection. Pollard wound a minimum

of 24 hours for the epoxy to harden before tightening a washer and nut onto the bolt protruding through the soil.

To top out of the retrofit, after the walls were up, Pollard drilled 3-inch spaced holes next to the double studs. He bolted the double studs on top of the soil plate and into the foundation, then horizontally through double studs. (Where there isn't room to drill vertically, Pollard uses brackets that wrap over the sill top and are fastened through the foundation sole.) Two weeks and four truckloads of concrete later, Jim is wondering if the first part of her house is to be built back up after weeks of demolition. The galvanized metalwork stands glistening in the sun, but her house stands against the next earthquake. "If you don't have a good foundation, it doesn't matter what you do aesthetically," she says classily. "It's like dressing up a pig. It'll be pretty, but you'll still have a pig." ■

PHOTO: STEVE POLLARD; TOP: BRIAN HOUSE CONSTRUCTION

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CARVING OUT A **KITCHEN**

An old garage makes way for an expansive family gathering place

In a stately white clapboard-clad farmhouse on the banks of the Blackberry River in North Canaan, Connecticut, seemed everything Joe Poindexter, a writer, and his wife, Holly McNeely, a graphic designer, were looking for in a country home. With its generously proportioned rooms and wide-plank pine floor boards, "there was something very elegant about it," McNeely says. Not to mention historic. The main section of the two-story Colonial dated to 1754, when it was

the family home of Samuel Forbes, a local "iron master," who was partners with Revolutionary War hero Ethan Allen. "We loved everything about it," Poindexter says. Everything, that is, but the kitchen wall. "Eddy made the soil. It was black, and we thought—well, a wall will be enough to replace," Poindexter jokes. "That was the extent of our original scheme."

But as the couple continued sifting soil, digging out logs, bulging walls, and uncovering old plaster, they realized that the house needed far more work than they had anticipated. "With old houses, once you start opening up the walls, you find all sorts of things you don't want to touch," McNerney, the owner of a Brooklyn, New York, renovation firm, recalls. "And that's when we began to look at the back of the kitchen, and we think about what we could do with it," Poindexter says. "And that's when this project started pulling the plug on our buck dreams."

ABOVE LEFT: Although the kitchen items are new to the first floor, it features a gallery plan in the ceiling area, with the ceiling joining the refrigerator and sink. The door of the cabinets in the dining room (left) is the same slatted wood as an undeniably rustic rustic model (above). **Photos (and artwork, "before" photo)** clockwise from top: space occupied by the former garage was reconfigured to feature a new entry and large mudroom.



With the guidance of architect Tim Bashears and a local builder, Ray Over, the couple came up with a scheme that went way beyond the kitchen work. Besides correcting all the structural problems and modernizing the existing 1960s era ceiling area, the project, budgeted at \$200,000, called for tearing down an attached garage, storage area, and half bath to make room for a sunny breakfast room, a back extension with a new half bath, and a screened porch capped by a cupola. The design also included the replacement of a back porch, a fire-tile floor, the old working fireplace, and a future carport.

The task, Bashears explains, was to replicate the addition so that it wouldn't clash with the clean lines of the old house. "You don't want it to feel as if one part of the house is 18th century and the other 20th century," he says. With the design in hand, Over got down to the structural repairs, such as how to strengthen and the cracked walls. "Over the years, the old house's wall under the half bath had completely reveal out," he explains. "The house started falling off the hill, and eventually it just broke loose and tipped out a bit." To make matters worse, previous owners had encouraged to add air to the house during the management of the stone wall. "They just stacked the wall when it was no longer necessary," Over says. Inside the old kitchen, the wall bulged noticeably.

After replacing the wall, Over and his crew shored up the wall as best they could. "Without raising the structure and tearing down, we could not straighten it or the wall appears a crookedly," he admits, thus the crew shamed out the cabinet to diagnose the circumstances. Equally sticky was the addition of the back extension. After tearing down the attached garage, Bashears reconfigured the space that had formerly housed it, along with a half bath, and a storage area, and then moved the back door to where the garage door had been. The door now opens to an atrium/hallway, with a new, larger half bath and a pressurized coat closet off it.

The far left of the new addition became the breakfast room, which adopts a tiered porch while a limestone stool to stand. "The limestone stool is turning out to be one of the most comfortable places in the house," Poindexter says. Bashears having themself a rounded limestone base keeps the floor steady when the weather is damp or chilly.



ABOVE: The black-painted door to the right marks the back entrance of the old kitchen. **ABOVE LEFT:** The fireplace, nearly dead in cherry, is the focal point of the screened blower. The red-framed opening, which led to a storage area and garage, now serves as an entry through which



SOUND SURROUND

To integrate the existing fireplace into the new kitchen, architect Tom Brashares designed a panelized surround in cherry, which is accented by a soapstone and granite surround and inserts. West Lewis and Chris Peterson of North Street Panelworks fabricated the paneling and installed the surround so that it would look like and wrap around the fireplace. The lower section, composed of two solid

cherry legs and a listing bracketed, was set free. The measured brackets to join this to the upper panel. A mounted shelf, which has been finished and glazed to this panel in the shop, takes the soapstone above the fire. The frame around the soapstone was kiln-dried and delivered in the shop, leaving just detail work to be added on site to hold it all. Finally, various custom molding was added along the miter line, to bridge the gap between it and the upper panel.

Clearing off the old brick duct allowed Brashares to replace a narrow soffit's star with a wider, wriggling one that is recessed from a larger new star built behind the kitchen. "It had to be flat, you'd have to re-enter the back soffit through an out-of-the-way door, because the owners then wanted their soffit to be as inconspicuous as possible," builder Bay One says.

Once the structural problems were solved, Brashares tackled the details of the kitchen's kitchen. He altered the short leg of the L to create a butler. The longer leg inclusion a 48-inch stainless-steel professional-style range that features two ovens, an burner, and a center grill, opposite, on the outside wall, in a 30-inch-wide refrigeration, with its freezer on the bottom, a dishwasher—and a gleaming replacement for the old version of a sink: a new, undermount stainless-steel double-bowl model.

Working surfaces, of Vermont soapstone, abounded. Along the range and bar walls, the soapstone is also used as the backsplashes, which run all the way to the wall cabinets. In the bar area, there is an auxiliary sink, a second refrigerator under the counter. This fridge is a pedestal, in likely McNulty's eyes. It controls the traffic flow throughout the room. Now McNulty and Peterson's teenage sons and friends can grab a drink or have a snack all the way through the cooking zone to the large refi-

ting, which was not relocated. An open-faced cabinet, mounted on the wall over the bar sink, is framed in cherry and filled in with glass shelves to showcase and store barware.

Integrating the broad old brick-ribbed fireplace into the new kitchen design posed an in-oven challenge. The chimney had burned into a slender half-story. "The idea," Brashares says, "was to create a special sort of 'Inglenook,' where, when people come for dinner, they can have a glass of wine while Holly and Jon are cooking."

To hide the brick, Brashares designed cherry paneling and a fireplace surround made of Vermont soapstone and granite framed by cherry molding. The wood complements the cabinetry while the soapstone matches the countertop. The side and back of the chimney are hidden by panel Shantock jamb.

Now that the addition is complete, the family is looking forward to spending their first summer in their remodeled house, especially now that they have so many comfortable spots where they can gather together. But, that doesn't mean they will have less of time to relax. Plans for a pool house and terrace, and a birdcage ping scheme, hint testimony to the fact that a remodeler's work is never done. "We're in love with the house," McNulty says with a laugh and a shrug. "Just how there are just so many outdoor documents to be made!" ■



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a tale of **two stories**



ABOVE
When the owners bought the Hamptons' Royal Beach, the building had just one and a half stories (plus). A sunroom gave them a valuable second floor for new guest rooms. A small deck garden helps create a bridge between the nearby residence and the house, and formulates the entry to the kitchen, which is the one most frequently used.



BY KIMBERLY STEVENS
PHOTOGRAPHY BY ANDRÉ KARWOWSKI

Max Salvatore loves to have a good time. And he especially likes to tell a good story. In fact, it was his passion for local legend that drew the New York

businessman to a 2,000-square-foot "beach shack" in Hampton Bays, Long Island. Nestled among old maple trees off a winding road dotted with farms and fields, the house was once the weekend haunt of Jack Kriendler, an original co-owner of New York's "21" Club, a famous speakeasy of the Prohibition Era (now a restaurant).

Max and his wife, Diane, fell for the place right away. "The house is just oozing with history," says Salvatore. "I love to think about all the wild parties and fun times they had back then." Celebrities of the '30s—like Arthur Treacher, Jack Hingle, and Ralph Bellamy—spent weekends at the property. Bellus he hit it big. Kriendler owned a series of saloons, pieces of



RIGHT One of the original rooms of New York City's "21" Club, a speakeasy where the house was built in 1940. The present owner discovered the name of the building's first owner, The Madison Club, in the 1930s. He recognized it and took the family's favorite vacationing hide. A plaque reads "The 21 Club At The Bay."



ABOVE: Six-foot-tall windows replaced the plate glass windows on the old sunroom (left). The custom built-in sofa is painted on a contrasting color to the walls to draw attention to the fireplace. The shades are slightly sheer to provide a view of the TV and other objects. The detailed fireplace mantel (right) is in keeping with the home's enhanced style.

which were added to the house. Salvatore already owned most of the land.

When the Salvatores bought the place, the eight-acre property included the primary house, two guest houses, a swimming pool, a Biltmore-style barbecue pit, and a tennis court. Though it was surrounded by sweeping water views of both the East River and the Bronx, the house didn't live up to its spectacular location. Over the years, it had fallen into more disrepair, and walls had been torn down and rooms added on without much attention to the structure or style of the home. It had a large kitchen, a living room, and a sunporch, but only a couple of small bedrooms. An extra space was being used as a spare bedroom. It was clear to the Salvatores—who have four grown children and six grandchildren—that a renovation would be needed to accommodate their growing family.

The renovation, resulting in a stunning transformation with the help of architect Cameron Cameron de Taylor Design Associates, of New York City, "We imagined a residence that had a sense of space and beauty integrated into the site," says Vicki Cameron, a partner at the firm. Because the Salvatores wanted, for privacy reasons, to maintain the footprint of the house, the plan added two bedrooms and a bath in a 1,400-square-foot second story. The addition also gave the simple house a modern presence by embellishing it with a number of details. They covered the roof deck, above a long expanse of windows along the eastern side of the house, with "Chinese Chippendale"-style valances arranged by shade at Montecarlo. They designed the kitchen extension—the one used most frequently—with a classically styled pierce and rounded by a small herb garden.

Even with all these changes, says local contractor Walter Case, of Whiter Case Contracting,



SMOKE AND MIRRORS

According to builder Walter Case, it is not unusual for old homes to have "tilting chimney syndrome." Trying to perfectly center a chimney on the roof proves it to be a challenge for many builders. If the fireplace location didn't start crooked, a mirror might simply blast the chimney at an angle. In this case, the masonry was leveled, or sheathed, the chimney 23 feet over 2 feet of height, resulting in a level of a 20-degree angle. During the construction of the second story, the chimney twisted in. It was completely rebuilt starting at the second story.



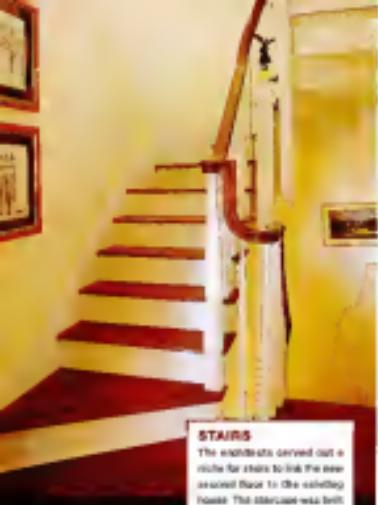
HELL-SHOCKED

Although the Batstoians passed their annual timber inspection with flying colors, supervisor Walter Egan witnessed serious damage during construction. He traced the ongoing invasion to a damp crawl space under the master suite. In the course of the renovation, precautions were taken to ensure the pests didn't return. New treatments done with preservatives-treated wood, and crucial spots between the foundation and the all-wood beams were treated inside—cooper or silicon sealants that prevent the insects from chewing wood.

Builder, the most demanding part of the job wasn't the new construction but repairs to the existing structure. "Major support beams were taken down almost every year and reenforced," he says. "It's surprising that the house didn't exist in '70." In addition, the crew had to replace other beams damaged by termites. And when workers began demolishing on the site, they discovered that the chimney was crooked at a 20-degree angle. Consequently, when the house was built, the location chosen for the fireplace itself is at the exact opposite end—the chimney is angled out at 180 degrees! Casa remade the top portion to correct this flaw.



"Keep the bottom of your crown molding level with the top of your cabinet doors for a nice-even reveal," says Tom Silva.



STAIRS

The architects carved out a niche for stairs to link the new second floor to the existing house. The staircase was built off site, broken into four pieces, and bolted into the space "to within an inch of its life," says contractor Cason. An essential structural support for the staircase—a solid full diagonal at a 45-degree angle—was kept through the staircase. While nothing for the stairs had to be bolted, a 2x6 (previously) provided temporary support.



PHOTO: ANDREW D. BROWN FOR TIME

The old staircase gave architects Miller the chance to create a true second floor with two guest bedrooms and a shared bath. Large windows lined each bedroom's charm and extra space, and each was designed with French doors leading to cedar decks with views of the water and granite. "We wanted to continue the line, playful feel of the house upstairs," says Cason. "I wanted it to feel like you could walk right out into the terrace." But, she adds, "it was also important to create spaces where guests could spend time away from the group." Thus the bedroom overlooking the terrace was designed with an enclosed porch to shield it from sun and rain.

Down the hallway comes up with the most whimsical feature of the second floor: a sunny playroom for the grandchildren. A concealed door on the landing leads to a space under the eaves that was converted into a child's dream hideaway, complete with a small window, heat, and air conditioning.

As the midcentury-dreamily redesigned and updated, the existing rooms in harmonic with the new masterrooms, one of their biggest challenges was the central integration of a staircase. "We had to move the stairs back in a space that previously contained a small closet and an old fashioned shop's hiding," says Cason. (The ladder was used to reach the stairs up.) A column with classical details that runs through the staircase serves as a support for the winding staircase, it is essentially an extended steel post. The need for such an element "presented an opportunity for an architectural reference," says Cason, but it also serves a symbolic function. "It was important to show the steps lead from the basement back, where we entered a life, to the guest room upstairs," says Salvatore says. "It makes visitors feel the whole place is available to them."



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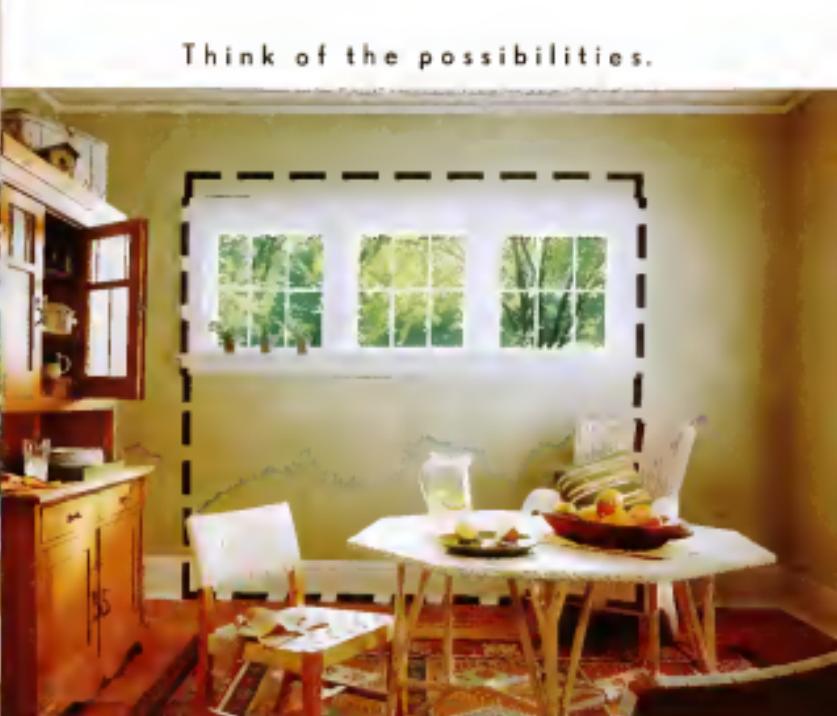
On the main floor, the architects replaced the dark stained paneling and exposed beams with clear walls and classical trim, and converted the old brick fireplace surround to the living room with a simple mantel mounted with Colonial Revival-style details. Because Mrs. Salvatore loved the look of the old-weathered glass windows, matching salvaged as many as possible and added them with new panes in the unweathered windows. The original white-plank oak floor was stripped and refinished to an aged luster. In both the sunroom and the small library, custom-built shelves and cabinetry add points of interest to the otherwise simple spaces. And the sunroom's wide windows were enlarged, some fitted with glass-paned French doors, to open up the interior.

The kitchen, which once had following '70s-style features and looks now replaced and walls, probably enjoyed the most striking makeover in the house. A few original details remain, including a large coppered J-Carver-built maple cabinet was salvaged, along with a warm maple floor. "The whole kitchen has the look and atmosphere of history," says Cameron. The room was much as history to the week that Luisa Caputo, a student of French gastronomy, did on the cabinets. Caputo, armed with an armful of fine herbs and sponges, created a subtle grain pattern using several different shades of green. Gouache of "Verde Riso" grapes, which has a pale green background and speckles of pink, complement the rose granite pots set side the window. The backsplash is hand-made hand-crafted ceramic tiles spelling a scallop crockle pattern in the Arno and Crema crudesse.

All the colors in the house, in fact—soft hues ranging from creamy yellow to pale blues and greens—were chosen to coordinate with the overall vision of the property, from the trees and gardens to the water. "The colors in a house that are chosen from nature can create wonderful movement from the indoors to the outdoors," says Cameron.

Mrs. Salvatore moves about the house and the grounds like the guru carriage. "This whole place is a work in progress," he says. "In my day, it was all about purifying and having a good time," for adults with a sense. "With my family and friends here all the time, I guess I'm creating my own happy day of sorts."

The massive deck on the first floor was expanded to maximize outdoor space to entertain and relax, and a sprawling deck overlooks a private garden. The outdoor shower room floor was tiled with bluest-cobalt floor tiles from India.



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As any home-improvement expert will tell you: Wood and water don't mix, especially in the bathroom, where humidity levels are notoriously high. For years, builders and contractors have been understandably skittish about using wood for anything other than vanities—or for accent trim—because, improperly treated and maintained, it will warp, crack, and rot in a moist environment, where condensation occurs. Nowadays, however, thanks to better ventilation in the bath, an increasing preference for enclosing the steamy shower in a separate stall, and improved finishes that prevent water absorption, the bathroom—and especially its splash-prone tub surround—is less vulnerable to fluctuations in humidity and moisture build-up. Taking their inspiration from Finnish saunas, Japanese soaking tubs, and other bathing spaces that feature wood, many architects and designers are specifying moisture-resistant species, such as teak, or panels that are treated to repel moisture, or painted. Wood has a natural appeal and adapts to most any style of bath, from the most formal, library-like sanctuary to a rustic, casual log-home retreat.

A 7-foot-high concrete wall at one end of the enclosed shower is wood, or solid or providing ample storage for the bathroom. Because as a porous, should now mean consider between the bathtub and the adjacent drywall. The deep recess in front of the shower offers a recessed extra surface for growing and/or plants.

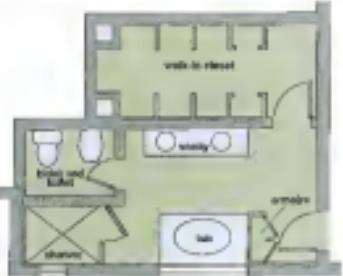


A contemporary, yet classic appearance is what Tom and Betty Strickland were after in the master bath in their home in Tucson, Arizona. However, built on the previous proposal. To that end, they couldn't imagine using any other material for the cabinetry, mirror frames, and backsplash but wood. When Tom had asked Betty to describe what her dream bath might include, she was fast led off with laudable welfare, a wood that captures a sense of tradition and formality—a look that would differ from other baths in the house.

Other coveted items included a soaking tub (in a corner bathroom bay), a separate room for the vanity and toilet, a wood shower, and plenty of storage, both in the back wall and in a separate walk-in closet. Tom's agenda focused on the shower. At 6 feet 4 inches, he wanted one that was large enough that he would not bump into walls while lathering up, and with a shower head high enough to enable him to stand up straight when rinsing off. He was also very particular about the fittings. "I had always been a lot with metals," he explains, "so that's what I chose."

To achieve the refined and elegant atmosphere they wanted, Tom Greenwood, the contractor for the entire house, designed every element of the bathroom, including the mirror that stands at one end of the tub and the panelled showering that faces it, with the same attention to detail that a cabinetmaker requires when crafting an individual piece of furniture. "All the oak work was done to reflect back to an earlier time," Greenwood says.

The team (which included the Stricklands, Eric Meiss, the contractor, and Elaine Pfeil, from Arizona Design Interiors, who assumed direction of the design when Greenwood moved his practice to San Antonio) made a unique approach in the building of the bath, adjusting the concepts along the way, making decisions on site, and made-



bring plans when necessary. Working this way can be more expensive, but, in this case, the decisions that were made saved money. For example, as originally conceived, the picture window over the tub was mounted several feet from where it ended up. Tom Meiss recommended a picture frame of 20x20, and moved it around to test out a variety of different views and determine the position of the current window. Other modifications—which did not involve the master room—included the construction of a small window in the shower and a rift cut recess above the door into the room occupied by the vanity and toilet. "Each element of this area was scrutinized to make sure we would achieve the best results before the work was done," Meiss explains.

The dock around the can-oak tub was a challenge because it was made from a single slab of mesquite, selected for its warm tone, which beautifully complements the white. Because it is porous and ask, the mesquite cracked along one of the narrow sections during construction. To remedy the damage, the gap was filled with a wood epoxy. There was an upside, though; a piece of stain was salvaged from the tub cursor to create a bench and niche in the shower.

The inclusion of a novel water feature also involved extra planning. Since the couple chose a "hydrant" model that is framed by two white columns through a plumbing had to be planned before the foundation were planned to prepare for its installation.

Lastly, Betty gave her input for a separate space for the toilet and bidet. In the design, the two fixtures occupy a 3 by 7 foot room adjacent to the shower.

The completed bath is just what Betty had in mind; it is elegant and refined, more pointing every element the way Tom asked for in the design. And it shows the edge that "wood and water don't mix" right out with the bathwater.



PHOTOGRAPH: ERIC MEISS

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巴拿馬獨立戰爭

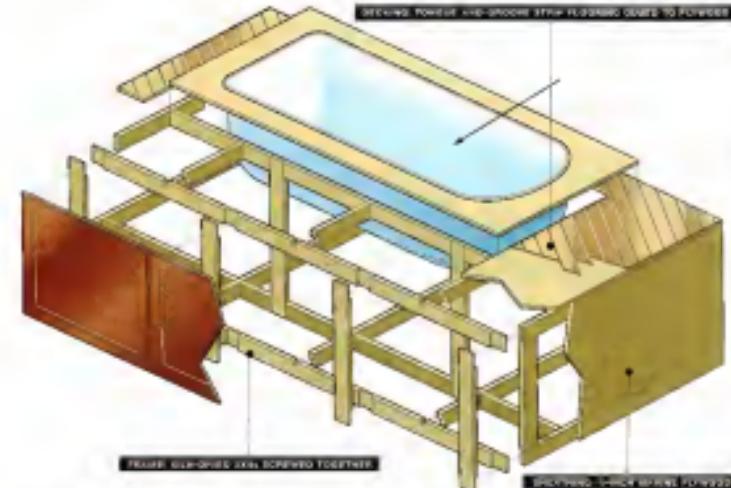
Before embarking on the construction of a hardwood bathtub surround, there are several factors to take into consideration. The most important is the weight of the tub, because this weight [up to 500 pounds] will affect how you support the tub. You will want the tub to be buttressed not only by the framing and the deck, but also by additional, firm support from the floor [see step-by-step by T.O.H. contractor Tom Silka on the opposite page].

You should also question the amount and type of use your tub will get. A teenagers' or children's bath will suffer more splashing than a quiet retreat for a guest or the family. As you measure out the splice the surround will occupy, remember to factor in the position of the plumbing that will have to be roughed in before construction begins—plus a step-up, if planned.

Most tubs stand 15 to 16 inches high; whirlpool baths can stand as high as 24 inches. One easy way to get a paneled look on a wood surround is by applying stock kitchen cabinet doors to the face (and sides); in this case, the tub must be raised, to 18 inches. How many doors will you need?

The number is based on the width of the door and the length of the tub. "Four 15-inch-wide doors would be used for a 5-foot tub," says Richard Dawson, owner of Classic Kitchens & Baths, in Ventura, California, "and three 24-inch doors for a 6-foot tub." If you have a whirlpool bath, the company adds, install one door on hinges to allow access to the whirlpool motor.

bath in a box, step-by-step



"Building a lab surrounded in blue training a local supplier does," says T.O. H. contractor Tom Sibley. "You have to use materials and techniques that they will stand up to, so does."

He makes the framework out of kiln-dried Zelkova—"the water's going to last us if we just let it right"—but he abhors it with multiple plasters, fasteners it with stainless steel rivets and screws, and uses narrow strips of quicksilvered vinyl taping for the seal. "You want to use a special like that or padding?" Tom says, speaking of the taping. "They don't expand much in humid conditions." And to ensure that water won't seep out the seam, he makes all sides of every plinth of taping with a paraffin-coated fabric.

• **MEASURE UP:** Using the hub itself or a manufacturer's template, You just need the surround's critical dimensions—the lip's height off the floor, the drain's distance from the wall, the size of the drain opening. He shows about 5 to 6 inches for the side deck. "Any wider and the tub will be difficult to get into and hard to clean."

- **FRAME WORK** With materials in hand, and rough plumbing and electrical work complete, Tom begins building the frame by connecting a 2x4 ledger later the wall. He sets this board about 5-inches higher than the actual lip height (minus the thickness of the sheathing and insulation) to allow for unevenness in the floor. For a 6-ft frame, he uses two 8-ft panels, and he screws everything together to make it easier for the plumber to make future repairs. Once the frame is assembled, sheathing is applied, and exterior trim is applied.

Board: He features plywood in his toy units' bottoms. Solid surfaces. • **GLUED DECK** Instead of nailing down the block boards, which might give water an opportunity to penetrate wood, Tom places them like the top of the staircase with mastic. He spreads the adhesive over the plywood with a 3-inch notched trowel and then, he holds the next in place while the glue sets, generally through the tongue of each plank with a couple of 1/2-inch stainless nuts. A dab of mastic on the nail head keeps the water out.

EARL W. CAULK Whenever he tries the rods of the Steering or Delta excepting holes for the tail's basal tail, he coats the wood with more polyurethane. "You don't need any repeated applications," he says. As a further defense against insects, he also places an air strip of masking, the kind that removes superfluous adhesives, layers of plastic, just under the tail's tip. "If you use caulk from a tube, you'll have a mess."

• IRREGULAR BED: The frame is set raised to carry the weight of a bed, as Tom sets it in a bed of fresh mortar, about one brick width increased into a stiff mix. When the mortar sets, the floor, set the frame, will support the bed and its occupants.

• **TRIM TIME** All that's left for Bourdeau is to trim out the segment idea with penknife and run a brief of acrylic knee creek, expand the talk's parameters, where it's and deciding next. "Make sure the result has a conclusion," he writes. "You don't want to have all your good work wasted for a specific reason." —Thomas Fisher

retro fittings



"The key to the installation is to rough it in correctly, to have the holes in the exact place, and the best way to ensure this is to have the fitting with you when you're roughing in the lines, rather than relying on a measured drawing."

—Bennett Teerwater
F O R planning and building economically



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HOT TO POT

Almost any place can become a garden—and almost any plant can be cultivated—even when soil, climate, and location seem to indicate otherwise. How? In decorative pots, urns, and tubs—almost anything that has a drainage hole. A vast array of plants can thrive in containers, from trailing ivy, cactus, and sedum to boxwood trimmed into a topiary and dwarf evergreen trees tamed by bonsai enthusiasts. Your only limitation is picking the right pot for the right plant. Pots naturally control growth, and some plants simply grow too big to be contained.

During last summer's extended East Coast drought, many gardeners decided to cultivate plants in containers; that way they could take care of the plants' watering needs on a daily basis.



LOW-KEELED YUCCA is a perennial, generally considered for its architectural interest. When grown together, several yucca heads look like a single plant's several crowns. A truly unique appearance is if several are potted together. This all-green arrangement also uses variegated ivy and spider plant, and smaller ferns with variegation.





Of course, a drought is not the only reason to have a container garden. Growing plants in pots is one of the easiest ways to garden in a limited area, or in a situation, such as an apartment terrace, where cultivating in the conventional manner is out of the question. Container gardening allows you to create miniature landscapes within a larger setting, or to enhance the look of a porch or deck. And, for the cook who dreams of a potager, or vegetable garden, herbs, hot peppers, lettuce, tomatoes, and other manageable vegetables can be grown in pots to yield a crop right outside the back door.

Another incentive to planting in pots is that it enables you to cultivate species that could not otherwise tolerate the climatic conditions of your area. Pots also allow you to extend the growing season; some plants, such as herbs, geraniums, and shamrock, will survive all year round in containers. Potted trees, too, will do well when placed outside, and bright sunlight during the winter; tropical plants such as palms, monstera, orange trees, and frangipani will thrive almost anywhere—even in a region that receives no frost until mid-April. In a cool, high precipitation area like the Pacific Northwest, sun-loving plants such as lantana can be potted and grown outdoors in warm, protected spots. Hot, and even of the country can embrace cool colors donated by home, ramparts, and colors collected in miniature sets along the earth side of a house.

It isn't necessary to spend thousands of dollars on unique or custom-designed pots to create a handsome garden. Shape, color, the scale of a plant relative to its container

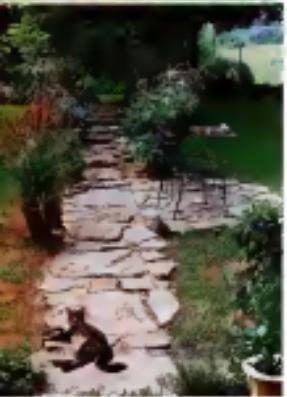
Container gardening is a way to create miniature landscapes within a larger garden setting.

(and the way it relates to their immediate surroundings), as well as a plant's growth pattern, all determine how the container garden will look. Before getting started, ask yourself what types of plants and how many of them you plan to grow. How far apart they'll be? Are they root-bound and need to be repotted? Do you want to give each plant its own pot or will you group several of the same species or a number of different types of plants in one container? If you'd like a cluster of colors, for example, try pairing traditional red geraniums with the same red. Will you choose a mixture of pots together? Will they be a variety of sizes? And, will they be made of the same or different materials?

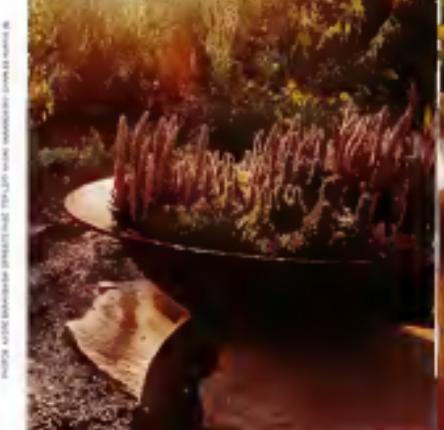
Containers of the same size look best when they are set side by side in a staggered fashion of different sizes and be positioned so that smaller plants will not be dwarfed or obscured by their larger or bolder neighbors. One way to stagger the height of pots, you can intentionally alter the height of a container by upturning an empty one-inch saucer under it. You can also support pedestals into the scene, windowsills or face stone embankments are two choices. Some pot collectors play off color, and because a vibrant plant looks more attractive when offset by a soft-toned container, such as a moss-dipped terra-cotta pot.

Terra-cotta is the traditional material for garden pots. Terra-cotta's porous helping prevents roots from becoming sodden from accidental over watering at heavy rains. Glazed pots hold water in the soil longer to benefit during hot spells and introduce new colors into the garden scheme. Plants that need lots of water, like ferns, thrive better in plastic pots.

When placing a large shrub or tree, many gardeners turn to root-covers or containers, which handle all types of weather well and can be left outdoors throughout the year. Container containers, long-lasting florists' pots with planters, are painted to prevent the pot from rusting. Unlike a container—of any type—it sits directly on the earth, it is wise to place



TOP: Terra-cotta pots planted with hot-pepper plants in a patch outdoors. BOTTOM: Pots sitting on a path share the eye over the garden.



TOP: terra-cotta pots
Bottom: terracotta and
fiberglass clay containers
sitting on a brick path. A
large clay container
serves as a focal point in a
paver yard. A gerbera
daisy provides a subtle
local painted rock
background. The textured
leaves of a sempervivum
complement the curved
line of a cast iron urn.





Potting A Plant

1. Choose a pot that is twice the size wider and deeper than the original pot. Before transplanting a plant, push on this blue button, please a few pebbles around a plant of blossoms lower around the base in the new pot. Gently knock the root mass out of the original container. If root-bound (roots are twisted around themselves), gently tease roots apart or always when you make a new root ball that will often new roots be suggest to the roots will mix.
2. Use a soil mix appropriate for your plant; only add sand and/or lime if necessary [Your nursery can advise you on lime and supplements you will need.]
3. Fill pot entirely with pebbles with matton soil.
4. Position the plant so that the soil line will be equivalent to the original pot. Don't place the plant any deeper or any shallower than it was before. Add soil, press around roots, and water well.

Some transplanted plants are in shady areas for a few days to allow recovery. Because they dry out quickly, potted plants require more attention to watering and feeding than their in-ground counterparts. In hot weather, plan to water every morning, sometimes twice a day, in the evening, too. Feed with fertilizer designated for potted plants as per the package directions—usually every other week. Some gardens are like fertilizer to half-strength soil; feed every week, as this results in weaker, weaker plants.

is a means to collect excess water and to keep wastewater away from damaging the surface the container stands upon.

Obstinate: a plant assumes a completely different personality depending on how it is pruned. In this case of compatible opponents, the obstinate, plow, such as the signs presented on the previous page. It visually caused the height of an arm, and its spines were able to inflict a lot of an "edge" to the arm's inherent formality. A row of these same plant types growing in a line, necessitate clay straight, by nature, may look less dramatic—but still have a distinct appeal. Pruning plants, such as ivy or factor, may be allowed to cascade over the sides of a tall hanging basket, while can be trained to stand up and out of a row of matching pots with a really



HOW TO REACH A FBT AND THEIR APPROVALS

For those who like the old-world look of wood-paneled walls—polish stone clay containers in a cool, shady spot under a white cloth (but not directly under a tree, as the roots will rot the wood). For the surfaces

you filled with cheerful annuals, such as geraniums, petunias, begonias, will punctuate a lawn, beds, or paths—or a simple window box—with delightful doses of color. To determine where you want to place your containers, move them around while they are empty, especially if you plan to fill them with plants, such as annuals, begonias, or geraniums in their contracts for a three-year period of time.

... whether you want to experiment with new plants in an established garden, add blooms or greenery to an otherwise bland setting or colorfully accessorize an existing garden scheme, or enjoy the pleasure of a more lush, more abundant, more colorful, more lushly clumped, container gardening in the perfect location to living with plants in a manageable way. ■



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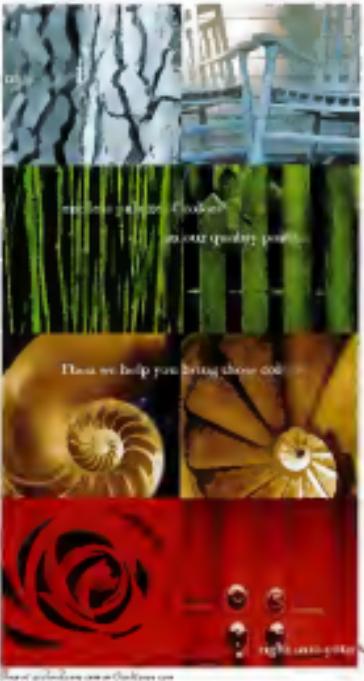
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Early American

During the colonial period, blacksmiths forged hardware as they needed it by heating iron and pounding it into shape. Handles were nailed to cabinets, rather than screwed. More uniform cast-iron knobs arrived later in the era.

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Victor

The late 19th century
motor, and since



ian

ury saw hardware adorned with ornate patterns. floral or curves. Cabinet hardware generally consisted of brass and porcelain or clear glass knobs.



Arts & Crafts

The sparrow style honored traditional craftsmanship, including hand-hammered copper metalwork. Even manufactured hardware featured simple lines, such as handles with square ends and bin pulls without surface embellishment.



House
HOME DECOR

Art Deco

This modern look emphasized streamlined geometric forms. Materials like chrome, aluminum, colored plastic, and glass were molded into sleek designs that celebrated the beauty of the machine age.



The Vanishing Hinge

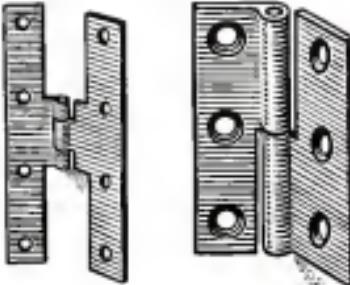
Although you can buy "period" hardware for kitchen cabinets, you can't replicate what a housewife would have used in her kitchen before the early 1800s—she didn't have cabinets. The kitchen was not a living space that got decorative attention, but a utilitarian room where food was cooked. The knobs on the preceding pages are interpretations of hardware from vintage doors, furniture, and butler's pantries. These sources also offer a host of old-fashioned hinge designs—from the wrought-iron H-hinges of colonial America to the brass butt hinges of the Victorian era—but such traditional hardware styles won't work on most modern cabinetry.

Today's stock cabinets are prefabricated boxes aligned along the wall, typically with overlay doors that either completely cover the cabinet or sit on top of a frame that trims the cabinet box (a face frame). In either case, modern swing-arm hinges fasten to the back of the door and the inside of the cabinet, and are therefore out of sight when doors are shut. Because the hinges are self-closing, doors don't need latches, once a necessity to prevent them from popping open.

Tolley's Euro-style hinges show stability with the cabinet and door for wide doors that provide easy access to the kitchen's inside. Adjustment screws make it simple to align door placement, and a quick-release mechanism on newer cup designs makes removing and replacing doors a snap.



WHERE TO BUY: www.tolleyhardware.com



The early American H-hinge (left) was straightforward from era and function. As the fads of the doorsoft era, by the Victorians era, from left (right) were added to the door's edge, as only the top showed.

Only some high-end stock and custom cabinets, with doors inset into face frames so they're flush with the cabinet fronts, can accommodate retro hinges. But homeowners who want to give standard cabinetry a period look can do so by simply adding appropriate knobs or pulls.

knobs pulls

THE FOSTER

The best cooks know that artful presentation makes a dish more appealing. Similarly, kitchen cabinets can become more attractive by simply embellishing them with new hardware. Change the knobs for ones with an old-fashioned look, and even plain, modern cabinets will take on vintage charm. Do the Victorian bustle just step out? Will the guests be swaying dancing after dinner?

Iron or brass, wood or chrome, ornate or plain—cabinet hardware comes in enough materials and styles to fit any housewife's decor. You can find a wide assortment at specialty hardware stores and on the Internet. Just keep a few practical considerations in mind. Replacement handles should fasten through the same holes as the old ones because patched holes tend to show. Be sleek with the type you have—one hole or two—and the existing placement. And choose hardware according to the rigors of life in your kitchen. (Except in houses where people like to paint their kitchens with food dyes with fingerpaints. With heavy use, lacquered coatings on brass knobs can wear off, allowing tarnish to form. Square knobs are especially intended to look in use; decoration can melt, and need frequent straightening to look their best. Most importantly, any hardware you choose should be easy to grab, so you can open a drawer with one finger—perhaps while holding sprigs of rosemary to garnish the dinner platter.)



BY JEANNE HUBER

PHOTOGRAPHS BY ERIC PIASECKI

DIRECTORY

HOME IMPROVEMENTS • EQUIPMENT SOURCE, PAGE 188 • HOW-TO FINISHES, PAGE 192

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Isle of Right

Halfway through the project, it's smooth sailing in Manchester

第二章 项目管理与组织



Non-fiction companion books to handy when it comes to the following Victoria bush fires made for the Non-fiction book awards:

Week 4 (May 8-12)

Whale howl: Steve Threlkelds off at the Harkness Theater Masters with cursor Mike Jeter on its marine corposse. Here Above andounding and barking spokescat. Right: Whales watch with drilled Bob Flomos by the PVC pipe. Below them is a line of 17 ground audio head cases. They reveal head pugil consultant Carl Della, who describes how the system extracts heat from ground waves to warm the house. Below takes a tour of some of Harkness's public use spaces—Frogs' Hindoo, Pops' Inst-

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ges. It was a quick glimpse of the straight plumbings, administrators, advantage of both PTC and user interface. As Chet noted, the creek sweeping the house is the area's water, which is formed by the historic Victorian brick that will surround the pool area.

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Fax: (330) 835-2109
Purchaser:
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Hitching Ice: E. Amherst
Dinner: Westchester MA 01084
Phone: (508) 229-2044

Week 11 (May 21-25)

脚註12：據《大清一統志》卷之三十一載：「漢中府，漢中縣」。據《漢中府志》卷之三載：「漢中府，漢中縣」。



[These were books of Boston on Massachusetts-
West] contained in the collection of the Boston
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House Calls. No matter how small a kitchen is, it's well planned if it can produce good results

OUTTAKES pp. 20-18

Bedroom East Coast Carpet Systems, Kalamazoo, MI, 800-343-2700, www.eastcoastcarpet.com

Dry Idea MicroDRILL 8409841 self-adjusting waterproof membranes, and Micro-DRILL waterproof damage patches, MicroDRILL, Duluth, GA, 404-464-3234.

HOUSE CALLS pp. 20-24

Architects Cameron Conner & Taylor Design Associates, Brooklyn, NY, 718-832-8387

Kitchen National, p. 24

Tapestry tiles Art Sacks Collection copy series, Art Sacks, 800-278-8453, www.artacks.com

Watercolor tiles WEF 888 series, 10" x 8", WEF 100 series golden 80, 21" x 21", WTM 6" x 4", WTS, Country Floors, New York, NY, 212-637-8300, www.countryfloors.com

Parquet tiles Simon's Hardwood and Vinyl, New York, NY, 212-532-0220,

ASK IRVINE pp. 28-31

Fire-rated gypsum drywall information: Gypsum Association, Washington, DC, 202-287-3440, www.gypsum.org; National Fire Protection Association, 617-770-3800, www.nfpa.org

Specifying fixtures Industrial Systems Inc., Ontario, Canada, 905-870-7513, www.issys.com.ca

Faux stone StoneTech Industries, San Marcos, CA, 760-746-8232

One thanks us R. Roy Shurley Conservation, Chester, AL, 205-591-3054, Builder Charles H. Haugland, 914-734-5725

ENHANCEMENTS: MEADY METAL pp. 32-34

Metal ceiling/wall designers Raupella Architonic, Staten Island, NY, 718-887-1320

Signature Kitchens, Staten Island, NY, 718-451-5308

Kitchens by Kleemann, Kansas City, MO, 816-531-0988

Net Kitchens, Brampton, Ontario, Canada, 905-494-3835, www.netkitchens.com; Alan Green & Associates, East Hampton, NY, 516-324-7437; **Manufacturers**: Quest Metalworks Ltd., Vancouver, B.C., Canada, 604-215-7771, www.questmetal.com

Photo: Peter M. Johnson



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Seaport Inc., Chicago, IL, 312/945-6733, www.seaportinc.com

Architects Jane Grossman Mathews, AIA, Mathews and Associates, Asheville, NC, 828-253-4300

Bathrooms Rock Kitchen, 828-469-1073

Plasterers Can Design and Supply LLC, Shelbyville, TN, 931-683-0336, www.canadesignandsupply.com

WHAT YOU NEED TO KNOW: GARAGE DISPOSERS p. 32

Garbage disposers: Model 7775 from InSink-Easy, Kansas, KS, 800-378-3712, www.inksink-easy.com

FINANCES: MOVE OR IMPROVE? pp. 34-35

Appraiser: Richard Newburg, Appraisals Unlimited, 617-739-0425, www.appraisalsunlimited.com

Bob D'Andrea, Capital Appraisals, 410-360-6200, www.capital-appraisal.com

Resonate: National Association of Home Builders, 202-221-9389, www.nahb.org

MATERIALS: ALL CORK AND NO ETS pp. 64-66

Cork suppliers: Andina, Dark Terra Tida, Terra Seta Mosaic from Espanola Cork Co., West Chester, PA, 800-345-6200, www.espanola.com

Edipo, Mondo, Lichen from Natural Cork, Augusta, GA, 800-484-2675, www.naturalcork.com

Cork Supply USA, Benicia, CA, 800-961-3300, www.corksupplyusa.com

Bona: Bona Hardwood Floor Coverings, New York, NY, 212-243-4993, www.bona.com

Information: Environmental Home Center, Seattle, Washington, 800-281-9783, www.environmentalhomecenter.com

TALKING SHOP: HOW WE'RE DOOKIN' pp. 72-74

The Doodad: Jellinco: circa \$3,200-\$3,400, available in June, 800-656-9126, www.thedoodad.com

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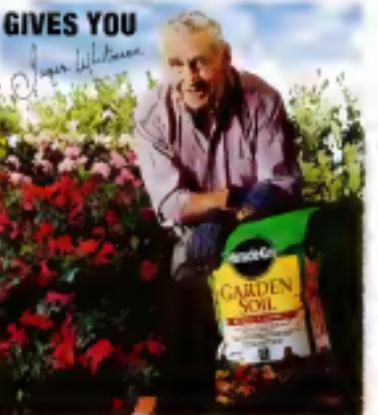


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Pages 104-105: "India Strip" is an Indian handwoven cotton runner, Elizabeth Eaton's Cotton Inc., South Norwalk, CT, 203-331-9347. Handwoven chanderi (mulberry cotton) and wooden bowls, available at Lillian August Collection, Westport, CT 203-499-1775.

A TALE OF TWO STORIES pp. 105-116

Architect: Clinton Corcoran & Terkler Design Associates, Brooklyn, NY 718-852-1617. Window treatments throughout by L. French Studios, Brooklyn, NY, 718-634-5565. Page 130: Pillows, American, Los Angeles, CA, 818-230-5389. For a store near you, 800-353-5359. Page 146: Grand Persian rug at Shiraz, Maroma, 800-513-6226, www.maroma.com.

WRAPPED IN WOOD pp. 116-124

Architect: Thomas Greenwood Architect, Almont, MI, 912-837-5415. Interior design: Elsie Paul, Arvey Design Associates, Tucson, AZ, 420-634-1012.

Contractor: Eric Morris, White Roseapple (project manager), Mexican Design & Building Corp., Tucson, AZ, 510-287-5111.

Furniture: Boca #ETT03; tub/sink, Elsie Savery Basin #100C540; Waterworks, 800-889-8757, www.waterworks.com. Fixtures: Clever bath tub #2110, St. Thomas Antiqua sink #1003000111 supplied by Able Supply, 520-445-5462. Towel warmer: Royal Hydronic #962, Mykonos, 800-658-9680, www.mykonos.com. Towel warmer: Towel Warmer Earth, Tucson, AZ, 520-721-5888.

Floor installation: Mike Letters, American Tile Pros, Tucson, AZ.

Paint: "Medio Ivory" paint, Sherwin Williams, 800-4-M-SHERW, www.sherwinwilliams.com.

Wall cover: Cedice #CN201AA, shade 160p, Brass Light Gallery, 800-243-8595, www.brlight.com.

Page 123

(top) Architect: Hilton Vandersloot Architects, Greenwich, CT, 203-844-7918. Building: Chris West, West Construction, New Canaan, CT, 203-968-7914.

Boston Fish Creek, Pl. Haughton, 740-881-9423.

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For more information on hardwood: The Hardwood Council, www.hardwoodcouncil.com. The Hardwood Information Council, www.hicweb.org.

Page 128

For right: Angkor bath faucet with hand shower, Kohler, 800-462-0188, www.kohler.com. Right: "Dianthus" faucet and hand shower designed by Michael Graves for Dornbracht USA, for dealer information call 800-774-1381, www.dornbracht.com. Cobra bath faucet with shower and handshower, Roper, for dealer information 800-488-5803, www.roper.com. Left: Bath faucet with circular decorative mixing valve with three-handled handles, Leto, 212-226-2242.

Chair thanks to: Richard Dietrich, Classic Kitchens and Baths, Vero Beach, FL, 800-518-1873, www.classickitchens.net.

HOT TO POT pp. 128-130

Contractor: Sample Curators, Kathmandu, VT, 802-434-2624, www.samplecurators.com. Cast stones: Distinctive Stone Statuary, www.distinctivestonestatuary.com.

Small plants: www.bonnieplants.com.

Large plants: www.bonnieplants.com.

Planters: www.bonnieplants.com.

Wall cover: Cedice #CN201AA, shade 160p, Brass Light Gallery, 800-243-8595, www.brlight.com.

Page 128

(top) Architect: Hilton Vandersloot Architects, Greenwich, CT, 203-844-7918. Building: Chris West, West Construction, New Canaan, CT, 203-968-7914.

"Hot to Pot": Terra-cotta pots planted with hot peppers enhance a porch entrance.

Orlando, FL, 407-568-6835, www.christiansenterprises.com. Further reading: *Container Gardening for Dummies*, 10C Books Worldwide Inc., 1998.

POSTER KNOBS AND PULLS 133-139

(front page) Bass Oval Knob, Country French design with a distressed finish, #9336-163-40, Alt. 522-50, Old & Elegant Distributing, Bellevue, WA, 425-451-6463.

Early American

1. Southwest iron pull #F530-285, \$46, Old & Elegant Distributing.

2. Faded iron knob #F546, \$4.95, each, Acorn Manufacturing, Mansfield, MA, 800-835-0121, www.acorn.com.

3. Trestle pull with iron knobs #F531-L125, \$18.55, Old & Elegant Distributing.

4. Cast-iron knob with scalloped plate #F592, \$14 for the set, Crown City Hardware, Pasadena, CA, 800-950-1847, www.crowncityhardware.com.

5. Pennsylvania Dutch pull #F100-AK22, \$18, Old & Elegant Distributing.

Victorian

1. Reclaimed barn door pull #516, Lori's Antique Hardware and The Hardware Gallery, Los Angeles, CA, 323-839-4803, www.hardware.com.

2. Polished nickel caped pull #F33-7612-US14, \$31.95, Old & Elegant Distributing.

3. Wrinkle brass恩特里克 pull #58, Crown City Hardware.

4. Faded glass knob #512, Lori's Antique Hardware.

5. Cast-iron Windsor knob #537L, \$18.95, Crown City Hardware.

Arts and Crafts

1. Square-edged iron pull #F1C1063, \$15.95, Old & Elegant Distributing.

2. Black enameled square knob #F1C1051, \$15.25, Old & Elegant Distributing.

3. Brass pull with oil-rubbed finish #F511C, \$15.50, Crown City Hardware.

4. Hand-hammered pull with brass finish #F1C108, \$32, Crofters Hardware Company, MD, 401-776-2481.

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5. Nickel bar pull #F1-C103-US15N, \$28.70, Old & Elegant Distributing.

Art Deco

1. Streamline chrome knobs \$32, Lori's Antique Hardware.

2. French aluminum knob \$18, Lori's Antique Hardware.

3. Modern chrome pull \$38, Lori's Antique Hardware.

4. Modern glass pull \$34, Lori's Antique Hardware.

5. Mahogany bar pull \$14, Lori's Antique Hardware.

More spring issues: Courtesy of Lori's Hardware, model #F1C108N, \$7.30. Further reading: *Decorative Hardware* by Terri Hartman, to be published Fall 2000 by Rizzoli Books, NY.



In the Victorian era, brass door knobs were mounted on the door's edge, as only the pins showed.

INSET: Mahogany door pull (not mounted on door) from Lori's Hardware. (not mounted on door) from Lori's Hardware.

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Antiques Roadshow appraised the sampler at \$25,000-\$30,000.

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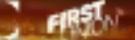
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